

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION**

WILLIAM SALVATORE,

Plaintiff,

vs.

3M COMPANY;
AGC CHEMICALS AMERICAS, INC.;
AMEREX CORPORATION;
ARCHROMA U.S.,INC.,
ARKEMA, INC.;
BUCKEYE FIRE EQUIPMENT;
CARRIER GLOBAL CORPORATION;
CHEMDESIGN PRODUCTS, INC.;
CHEMGUARD, INC.;
CLARIANT, INC;
CORTEVA, INC.;
DEEPWATER CHEMICALS, INC.;
DUPONT DE NEMOURS, INC.;
DYNAX CORPORATION;
EIDP, INC. (f/k/a E. I. DU PONT DE
NEMOURS & CO.);
FIRE-DEX, LLC;
GLOBE MANUFACTURING COMPANY
LLC;
HONEYWELL SAFETY PRODUCTS USA,
INC.;
JOHNSON CONTROLS, INC.;
LION GROUP, INC.;
MINE SAFETY APPLIANCE COMPANY;
MSA SAFETY, INC.;
NATIONAL FOAM, INC.;
PBI PERFORMANCE PRODUCTS, INC.;
PERIMETER SOLUTIONS, LP;
RAYTHEON TECHNOLOGIES
CORPORATION;
STEDFAST USA, INC.;
SOUTHERN MILLS INC. d/b/a TENCATE
PROTECTIVE FABRICS;
THE CHEMOURS COMPANY;
TYCO FIRE PRODUCTS, L.P.; and,

MDL No. 2:18-mn-2873-RMG

**COMPLAINT FOR DAMAGES AND
INJUNCTIVE RELIEF**

Jury Trial Demanded

W.L. GORE & ASSOCIATES, INC.

Defendants.

Plaintiff, WILLIAM SALVATORE (“Plaintiff”), brings forth this pleading by and through undersigned counsel, and alleges as follows:

INTRODUCTION

1. Plaintiff brings this action against Defendants due to prolonged exposure to per- and polyfluoroalkyl substances (“PFAS”) during his firefighter career and through ingesting PFAS due to drinking contaminated water.

2. Plaintiff resides in the village of Mansfield in Piatt County, Illinois. Plaintiff is a former military and civilian firefighter who proudly served on United States Air Force (USAF) bases for approximately thirty-one (31)¹ years, from approximately October 1977 up until his retirement in approximately May 2012.

3. Plaintiff brings this action for monetary damages and appropriate equitable and injunctive relief for harm resulting from exposure to per- and polyfluoroalkyl substances (“PFAS”) that were manufactured, designed, sold, supplied, distributed and/or contained in products manufactured, designed, sold, supplied and/or distributed by each of the Defendants, individually or through their predecessors or subsidiaries.

4. PFAS are human-made chemicals known as “forever chemicals” because they are immune to degradation, bio-accumulate in individual organisms and humans, and increase in

¹ Plaintiff’s air force career was approximately 31 years, over a span of approximately thirty-five (35) years.

concentration up the food chain. PFAS exposure to humans can occur through inhalation, ingestion, and dermal contact.²

5. PFAS have been associated with multiple and serious adverse health effects in humans including cancer, tumors, liver damage, immune system and endocrine disorders, high cholesterol, thyroid disease, ulcerative colitis, birth defects, decreased fertility, and pregnancy induced hypertension. PFAS have also been found to concentrate in human blood, bones, and organs and, most recently, to reduce the effectiveness of vaccines, a significant concern in light of COVID-19. PFAS has also been found to cause epigenetic changes associated with carcinogenesis.

6. For decades, Defendants were aware of the toxic nature of PFAS and the harmful impact these substances have on human health. Yet, Defendants manufactured, designed, marketed, sold, supplied, and/or distributed PFAS and PFAS chemical feedstock, as well PFAS containing turnouts and Class B foam, to firefighting training facilities and fire departments nationally, including the United States Air Force. Defendants did so, moreover, without ever informing firefighters or the public that turnouts and Class B foams contained PFAS, and without warning of serious health injuries that can result from exposure to PFAS or PFAS-containing materials. Even worse, Defendants concealed the hazardous toxicity, persistence, and bioaccumulation of PFAS, and repeatedly misrepresented the safety of PFAS or PFAS-containing materials.

7. For purposes of this Complaint, the term *PFAS* will collectively include perfluorooctane sulfonic acid (“PFOS”), perfluorooctanoic acid (“PFOA”), perfluorononanoic acid (“PFNA”), perfluorobutanesulfonic acid (“PFBS”), perfluorohexanesulfonic acid (“PFHxS”),

² Suzanne E. Fenton, MS, PhD, *PFAS Collection*, Environmental Health Perspectives (February 22, 2019), <https://ehp.niehs.nih.gov/curated-collections/pfas>.

and hexafluoropropylene oxide dimer acid (“HPFO” or commonly referred to as “Gen-X Chemicals”), all of which fall within a class of chemicals known as “PFAS” or “foam-forming chemicals.” PFAS are found within the fluorochemical products defined above as well as their precursors and derivatives, all their salts and ionic states, as well as the acid forms of the molecules and their chemical precursors.

8. Plaintiff wore turnouts and used and/or was exposed to Class B foam in the usual and normal course of performing his firefighting duties and training and was repeatedly exposed to PFAS in his workplace. He did not know and, in the exercise of reasonable diligence, could not have known that these products contained PFAS or PFAS-containing materials. He also didn’t know that PFAS was in his body and blood, nor did he learn of the potential harm this had the potential to cause until well after his military career.

9. In addition, Plaintiff brings this action to recover monetary damages and appropriate equitable relief for harm sustained from exposure to, and consumption of, drinking water that Defendants knowingly contaminated with PFAS-containing Aqueous Film Forming Foam (“AFFF”) products at various locations, such that the Defendants knew or should have known that the said products would be delivered to the Chanute Air Force Base, Eglin Air Force Base, Keesler Air Force Base, Naval Construction Battalion Center, Lackland Air Force Base, Ramstein Air Base, Andrews Air Force Base (n/k/a Joint Base Andrews Naval Air Facility Washington), and Beale Air Force Base for training and firefighting activities.

10. Over the years, the Defendants knowingly and recklessly manufactured, designed, marketed, distributed, released, promoted, and/or sold bio-persistent, cancer-causing per- and polyfluoroalkyl (“PFAS”) substances that were discharged into nearby streams/underground soil,

including Plaintiff's source of drinking water, all while persistently and fraudulently denying the deleterious nature of their activities.

11. Defendants designed, advertised, manufactured, marketed, distributed, stored, sold, and/or used PFAS chemicals with the knowledge that these toxic compounds would be released into the environment during fire protection, fire training, and first response activities, even when used as directed and for the purposes intended by Defendants.

12. Defendants knew or reasonably should have known that these compounds would reach groundwater, pollute drinking water supplies, render drinking water unusable and unsafe, and threaten public health and welfare, yet decided to cover it up, deny and persistently avoided their obligations and responsibilities.

13. At all times pertinent to this action, Plaintiff did not know, nor could Plaintiff have known, of the ongoing contamination of his drinking water through the use, release, storage, and/or disposal of Defendants' PFAS substances as Defendants failed to disclose and actively hid the toxic nature and harmful effects of these PFAS chemicals.

14. Plaintiff did not learn of this PFAS exposure until approximately July 2023, when he started seeing commercials and media discussing the potential hazards of PFAS chemicals in firefighter turnout gear and foam, as well as in the water at the bases used for drinking. He joined a Facebook group where other individuals were going through the same things, and where they would discuss these chemicals being a connection between them all.

15. Plaintiff brings this action against Defendants and seeks damages, together with any appropriate injunctive or other relief and medical monitoring arising from the same.

PARTIES TO THE ACTION

A. Plaintiff

16. Plaintiff was a United States Air Force military and civilian firefighter for approximately thirty-one (31) years. Plaintiff served on Air Force Bases with known PFAS contamination: Chanute Air Force Base, Eglin Air Force Base, Keesler Air Force Base, Naval Construction Battalion Center, Lackland Air Force Base, Ramstein Air Base, Andrews Air Force Base, and Beale Air Force Base.

17. Plaintiff is a current resident of Mansfield, Illinois.

18. Plaintiff was diagnosed and has been treated for hypothyroidism, and prostate cancer, which are believed to either have been caused, or aggravated, as a result of PFAS exposure.

19. Plaintiff worked as a military firefighter from approximately October 1977 through May 1986. Plaintiff worked as a civilian firefighter from approximately June 1986 through May 2012, with a break in service from August 1988 through December 1991, and again in June 1995 through June 1996.

20. Plaintiff was stationed on Chanute Air Force Base from approximately October 1977 through February 1978. Plaintiff was a student at the USAF fire school where he performed structural and aircraft firefighting training sessions using AFFF to extinguish fires.

21. Plaintiff was stationed on Eglin Air Force Base from approximately March 1978 through March 1980. Plaintiff worked as a military firefighter.

22. Plaintiff was stationed on Chanute Air Force Base from approximately March 1980 through May 1984. Plaintiff worked as a military fire school instructor on base. In this position, plaintiff worked as a structural fire instructor and would teach a class of approximately ten (10) students in approximately two (2) to three (3) week intervals. Plaintiff would also regularly assist the firefighter aircraft instructors.

23. Plaintiff was stationed on Keesler Air Force Base from approximately June 1984 through May 1986. Plaintiff worked as a military firefighter.

24. Plaintiff was stationed on Naval Construction Battalion Center, Air Force Base from approximately June 1986 through August 1988. Plaintiff worked as a civilian firefighter as a fire inspector.

25. Plaintiff was stationed on Lackland Air Force Base from approximately December 1991 through June 1995. Plaintiff worked as a civilian firefighter.

26. Plaintiff was stationed on Ramstein Air Force Base in Germany from approximately June 1996 through August 1999. Plaintiff worked as a civilian firefighter.

27. Plaintiff was stationed on Andrews Air Force Base from approximately February 2000 through May 2005. Plaintiff worked as a civilian firefighter and also during his tenure on Andrews, held the position of Assistant Fire Chief.

28. Plaintiff was stationed on Beale Air Force Base from June 2005 through May 2012. Plaintiff worked as a civilian firefighter and held the position of Assistant Fire Chief.

29. In the course of firefighting training and fire suppression activities, Plaintiff recalls using eight (8) to nine (9) sets of turn-out gear while he was serving on the Airforce and six (6) to seven (7) sets of turn-out gear when he was working as a civilian firefighter. Plaintiff also remembers, that throughout his service, his turn-out gear was washed at the station around approximately 2005, when he was a civilian firefighter. The gear was cleaned around every three (3) to four (4) months with a non-sudsing cleaner. They used commercial sized washer and dryers, but they were regularly out of service due to the heavy weight of their turn out gear being hard on the machines.

30. Plaintiff also regularly consumed drinking water contaminated with Defendant's PFAS chemicals while Plaintiff was stationed at the aforementioned bases.

31. Plaintiff alleges that PFAS or PFAS-containing materials developed, manufactured, marketed distributed, released, sold, and/or used by Defendants in turnouts and Class B foam, as herein alleged, caused them to be exposed to PFAS and/or PFAS-containing materials. Such exposure was a substantial factor and proximate cause of the cancers, serious illnesses and bodily injuries suffered by Plaintiff, as alleged herein.

B. Defendants

32. Upon information and belief, Defendants' fluorochemical products including, but not limited to, PFOA and PFOS containing fluorochemicals/intermediates and AFFF, were used at the military installations at which Plaintiff resided and worked, fire training facilities, and/or fire departments such that those compounds traveled by stormwater, surface water, groundwater, and contaminated Plaintiff's drinking water supply and/or caused chemical exposure through dermal and inhalation exposure pathways. Defendants' Fluorochemical Products have also been used and disposed of into wastewater systems and the environment in general, causing contamination to stormwater, surface water, and groundwater that traveled to Plaintiff's drinking water supply.

33. Defendant 3M Company (f/k/a Minnesota Mining and Manufacturing Company) ("3M") is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 3M Center, St. Paul, Minnesota 55133 and is registered to do business in Illinois. Beginning before 1970 and until at least 2002, 3M manufactured, distributed, and sold Fluorochemical Products. 3M manufactured, distributed, and sold AFFF containing PFAS throughout the United States, including in Illinois. 3M researched, developed, manufactured,

designed, marketed, distributed, released, promoted, and/or otherwise sold products and raw materials containing PFAS in markets around the country since at least the 1970s.

34. Defendant AGC Chemicals Americas Inc. (“AGC”) is a corporation organized and existing under the laws of Delaware, having a principal place of business in 5 East Uwchlan Avenue, Suite 201, Exton, PA 19341. AGC and/or its affiliates manufactured fluorochemicals used in AFFF. AGC does and/or has done business throughout the United States, including in Illinois, and is registered to do so. On information and belief, AGC is the North American subsidiary of AGC Inc. (f/k/a Asahi Glass, Co., Ltd.) and does business throughout the United States.

35. Defendant Amerex Corporation (“Amerex”) is an Alabama corporation and does business throughout the United States. Amerex has its principal place of business at 7595 Gadsden Highway, Trussville, Alabama 35173. Amerex made, manufactured, distributed, marketed, and/or sold fluorochemical products throughout the United States, including conducting business in Illinois.

36. Defendant Archroma U.S., Inc. (“Archroma”) is a Delaware corporation with its principal place of business located at 5435 77 Center Dr., #10, Charlotte, North Carolina 28217. Upon information and belief, Archroma U.S., Inc. is a subsidiary of Archroma Management, LLC, and supplied Fluorochemical Products for use in AFFF sold throughout the United States, including in Illinois. On information and belief, Archroma is a successor to Clariant.

37. Defendant Arkema, Inc. (“Arkema”) is a corporation organized and existing under the laws of Pennsylvania, having a principal place of business at 900 First Avenue, King of Prussia, PA 19406. Arkema and/or its predecessors manufactured fluorosurfactants used in AFFF. Arkema is a successor in interest to Atochem North American, Inc., Elf Atochem North America, Inc., and

Atofina Chemicals, Inc. and does and/or has done business throughout the United States, including in Illinois.

38. Defendant Buckeye Fire Equipment (“Buckeye”) is a North Carolina corporation that does business throughout the United States, including conducting business in Illinois. Buckeye has its principal place of business in Kings Mountain, North Carolina. Buckeye developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams throughout the United States.

39. Defendant Carrier Global Corporation (“Carrier”) is a Delaware corporation with its principal place of business located at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418. Upon information and belief, UTC is now a division of Carrier and manufactured and sold fluorochemical products. Upon information and belief, Carrier does and/or has done business throughout the United States, including Illinois. Carrier inherited UTC’s Fire & Security businesses, including the Chubb Fire and Kidde-Fenwal brands, when it was formed in March 2020. Carrier is now the parent corporation of Kidde-Fenwal Inc., a manufacturer of fluorochemical products.

40. Defendant ChemDesign Corporation (“ChemDesign”) is a Massachusetts corporation with its principal place of business in Fitchburg, Massachusetts. ChemDesign is a wholly-owned subsidiary of Chestnut Acquisition Corporation (“Chestnut”), a Delaware corporation with its principal place of business in New Jersey. ChemDesign Products, Inc. manufactured fluorochemical products for Tyco/Chemguard AFFF products.

41. Defendant Chemguard, Inc. is a Texas corporation with its principal place of business at One Stanton Street, Marinette, Wisconsin 54143. Beginning in or around 1994, Chemguard began manufacturing AFFF that contained PFOA. Upon information and belief,

Chemguard manufactured, distributed, and/or sold AFFF foam containing PFOA throughout the United States, including in Illinois. Upon information and belief, Chemguard manufactured, distributed, and/or sold AFFF foam containing PFOA in Illinois and which has contaminated Plaintiff's drinking water supply.

42. Defendant Clariant Corporation ("Clariant") is a New York corporation with its principal place of business at 4000 Monroe Road, Charlotte, North Carolina. Clariant research, developed, manufactured, designed, marketed, distributed, released, promoted, and otherwise sold PFAS and fluorochemical products, including AFFF, in markets around the United States, including within Illinois.

43. Defendant Corteva, Inc. ("Corteva") is a Delaware incorporated company with its principal place of business at 974 Centre Road, Building 730, Wilmington, Delaware 19805. Corteva is one of the spin-off companies from DowDuPont, Inc., and is believed to have assumed some of the PFAS liabilities of Old Dupont.

44. Defendant Deepwater Chemicals, Inc. ("Deepwater") is a corporation organized under the laws of Delaware, with its principal place of business located at 196122 E County Road 40, Woodward, OK, 73801. On information and belief, Deepwater Chemicals designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products throughout the United States, including Illinois.

45. Defendant Dynax Corporation ("Dynax") is a corporation organized and existing under the laws of Delaware and having a principal place of business at 79 Westchester Avenue, Pound Ridge, New York 10576 and an address for service of process at 103 Fairview Park Drive Elmsford, New York 10523-1544. On information and belief, Dynax researched, developed, manufactured, designed, marketed, distributed, released, promoted, and otherwise sold PFAS and

fluorochemical products, including compounds used in AFFF, throughout the Unified States, including Illinois.

46. Defendant EIDP, Inc., formerly known as E. I. du Pont de Nemours & Co. (“Old DuPont”), is a corporation duly organized under the laws of the State of Delaware, with its principal place of business located at 974 Centre Road, Wilmington, Delaware 19805. Old DuPont has done business throughout the United States, including conducting business in Illinois. Old DuPont has been involved in the production and sale of fluorochemical intermediaries for use in AFFF manufacturing since the 1950s. When 3M left the market, Old DuPont took on a larger role in the AFFF market. Old DuPont has also manufactured, distributed, and sold Fluorochemical Products and raw PFAS around the country pursuant to a nationwide marketing campaign. Also, on information and belief, Old DuPont was engaged in joint ventures and other business arrangements with Illinois entities for the development of Fluorochemical Products.

47. Defendant DuPont de Nemours, Inc., formerly known as DowDuPont Inc. (“New DuPont”) is a corporation duly organized under the laws of the State of Delaware, with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805. New DuPont does business throughout the United States, including in Illinois. New DuPont assumed direct liability for Old DuPont’s decades-long history of causing widespread PFAS contamination around the country, and indeed the world.

48. Defendant Fire-Dex, LLC (“Fire-Dex”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. Fire-Dex has its principal place of business in Medina, Ohio. Fire-Dex developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts, including in Illinois.

49. Defendant Globe Manufacturing Company, LLC (“Globe”) is a New Hampshire corporation that does business throughout the United States, including conducting business in Illinois. Globe has its principal place of business in Pittsfield, New Hampshire. Globe developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois. Defendant Mine Safety Appliance Company acquired Globe Holding Company, LLC and its subsidiaries (collectively, “MSA/Globe”) in 2017 and continues to do business under the Globe name.

50. Defendant Honeywell Safety Products USA, Inc. is a corporation duly organized under the laws of the State of Delaware with its registered place of business in the U.S. at 9680 Old Bailes Road, Fort Mill, SC. Honeywell does business throughout the United States, including in Illinois. Upon information and belief, Honeywell developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois.

51. Defendant Johnson Controls, Inc. (“Johnson Controls”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. Johnson Controls has its principal place of business in Milwaukee, Wisconsin. Johnson Controls is the parent of Defendants Tyco Fire Products, LP and Chemguard, Inc. Johnson Controls developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois.

52. Defendant Lion Group, Inc., (“Lion”) is an Ohio corporation that does business throughout the United States, including conducting business in Illinois. Lion has its principal place of business in Dayton, Ohio. Lion developed, manufactured, marketed, distributed, released, sold,

and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois.

53. Defendant Mine Safety Appliances Company, LLC (“MSA/Globe”) is a Pennsylvania corporation that does business throughout the United States, including conducting business in Illinois. MSA has its principal place of business in Cranberry Township, Pennsylvania. MSA acquired Globe Holding Company, LLC and its subsidiaries (collectively, “MSA/Globe”) in 2017 and continues to do business under the Globe name. MSA developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois.

54. Defendant MSA Safety, Inc., is a corporation duly organized under the laws of the State of Pennsylvania. MSA has its principal place of business in Cranberry Township, Pennsylvania. In 2017, MSA acquired Globe Holding Company, LLC and its subsidiaries (collectively, “MSA/Globe”) and continues to do business under the Globe name. MSA developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in Class B foams, including in Illinois.

55. Defendant National Foam, Inc. (“National Foam,” a/k/a Chubb National Foam) is a corporation organized and existing under the laws of Delaware, having a principal place of business at 141 Junny Road, Angier, North Carolina 27501. National Foam manufactures AFFF agents, including Universal Gold and the Angus brand of products and is the successor-in-interest to Angus Fire Armour Corporation (collectively, “National Foam/Angus Fire”). At all relevant times, National Foam manufactured and sold fluorochemical products.

56. Defendant PBI Performance Products, Inc. (“PBI”) is a South Carolina corporation that does business throughout the United States, including conducting business in Illinois. PBI has

its principal place of business in Northern Charleston, South Carolina. PBI developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams.

57. Defendant Perimeter Solutions, LP, (“Perimeter Solutions”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. Perimeter Solutions has a principal place of business at 8000 Maryland Avenue, Suite 350, Clayton, Missouri 653105. In 2019, Perimeter Solutions purchased a products division of Amerex. Perimeter developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams and AFFF.

58. Defendant Raytheon Technologies is the parent company of United Technologies Corporation (“UTC”) Fire and Security. Upon information and belief, Raytheon Company and Collins Aerospace are subsidiaries of Raytheon Technologies. Raytheon is a corporation organized under the laws of Delaware with its principal place of business at 10 Farm Springs Road, Farmington, Connecticut 06032. On information and belief, Kidde-Fenwal, Inc., a manufacturer of PFAS products, was acquired by UTC in or around 2005. Raytheon does and/or has done business throughout the United States, including Illinois, and manufactured and sold PFAS and/or AFFF containing PFAS.

59. Defendant StedFast USA, Inc. (“StedFast”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. StedFast has its principal place of business in Piney Flats, Tennessee. StedFast developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams.

60. Defendant Southern Mills, Inc. (d/b/a/ TenCate Protective Fabrics), (“Tencate”) is a Georgia corporation that does business throughout the United States, including conducting business in Illinois. Tencate’s principal place of business is in Union City, Georgia. Defendant Tencate developed, manufactured, marketed, distributed, released, sold, and/or used PFAS and PFAS products, in turnouts and Class B foams.

61. Defendant The Chemours Company (“Chemours”) is a corporation duly organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, Wilmington, Delaware 19899. Chemours does business throughout the United States, including conducting business in Illinois. Chemours was a wholly owned subsidiary of Old DuPont. In July 2015, Old DuPont completed its spin-off of Chemours as a separate, publicly traded, entity. Chemours has since then received and begun manufacturing certain product lines from Old DuPont, including some product lines involving manufacture, sale, and distribution of PFAS-containing intermediates and Fluorochemical products including in turnouts and/or Class B foams, including in Illinois. In connection with the spin-off, Chemours assumed direct liability for Old DuPont’s decades-long history of causing widespread PFAS contamination around the country, and indeed the world.

62. Defendant Tyco Fire Products, L.P. (“Tyco”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. Tyco has its principal place of business in Exeter, New Hampshire. Tyco developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including in Illinois.

63. Defendant W. L. Gore & Associates, Inc., (“Gore”) is a Delaware corporation that does business throughout the United States, including conducting business in Illinois. Gore has its

principal place of business in Newark, Delaware. Gore developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnout gears and/or Class B foams.

64. Any references to a defendant or defendants in this Complaint include any predecessors, successors, parents, subsidiaries, affiliates, and divisions of the named defendants.

65. Plaintiff alleges that each named Defendant is in some manner responsible for the acts alleged herein and that they proximately caused the injuries to Plaintiff, as alleged herein.

66. Plaintiff alleges that each named Defendant derived substantial revenue from the PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams that Defendants designed, developed, manufactured, tested, packaged, promoted, marketed, advertised, distributed, labeled and/or sold within Illinois, and that were used by Plaintiff herein within Illinois.

67. Defendants expected or should have expected their acts to have consequences within the State of Illinois, and derived substantial revenue from interstate commerce.

68. Defendants purposefully availed themselves of the privilege of conducting activities within the State of Illinois, thus invoking the benefits and protections of its laws.

JURISDICTION AND VENUE

69. This Court has jurisdiction over this action under 28 U.S.C. § 1332(a) and 1332(c)(1) in that there is complete diversity among the parties and the amount in controversy exceeds \$75,000 exclusive of interest and costs.

70. Venue is proper in this District Court pursuant to this Court's Case Management Order ("CMO") No. 3. Plaintiff states that but for the Order permitting direct filing in the United States District Court for the District of South Carolina, Plaintiff would have filed this Complaint

in the United States District Court for the Central District of Illinois. Further, in accordance with CMO 3, Plaintiff designates the United States District Court for the Central District of Illinois as the home venue. Venue is originally proper in this District Court pursuant to 28 U.S.C. §1391 because it is the judicial district in which Plaintiff was a resident and/or citizen, a substantial part of the events or omissions giving rise to the claims occurred, and Defendants conduct business within the district. Plaintiff resides in Piatt County, Illinois.

BACKGROUND AND FACTUAL ALLEGATIONS THE PFAS COMPOUNDS

71. PFAS chemicals are a family of chemical compounds containing fluorine and carbon atoms.

72. Aqueous film-forming foam (“AFFF” or “foam-forming chemical”), a form of long chain PFAS, is a fire suppressant used to extinguish flammable liquid fires such as fuels. The PFAS family of chemicals is entirely anthropogenic and are not naturally occurring.

73. As a family of PFAS compounds, AFFF products are persistent, toxic, and bio-accumulative, as well as highly mobile in soil and groundwater.³

74. Exposure to PFAS has been associated with several negative health outcomes in both humans and animals, including, but not limited to, chronic medical conditions and cancers.⁴

75. The U.S. Environmental Protection Agency (EPA) has noted that “drinking water can be an additional source [of PFOA/PFOS in the body] in the small percentage of communities

³ U.S. Department of Health and Human Services, 2021 Toxicological Profile for Perfluoroalkyls Released, (last visited Sep. 23, 2023) at: <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>

⁴ ATSDR, *What are the Health Effects of PFAS?*, Agency for Toxic Substances and Disease Registry, Toxicological Profile for Perfluoroalkyls ch. 1, at 3. (2021), <https://www.atsdr.cdc.gov/pfas/health-effects/index.html> [https://perma.cc/PEY3-98XL]. See also Jodi Green, *A Roadmap to Insurance Coverage for the Mother of Toxic Torts: PFAS*, JD SUPRA (Sept. 9, 2022), <https://www.jdsupra.com/legalnews/a-roadmap-to-insurance-coverage-for-the-9877551/> [https://perma.cc/959L-CX49]

where these chemicals have contaminated water supplies.” In communities with contaminated water supplies, “such contamination is typically localized and associated with a specific facility, for example ... an airfield at which [PFOA/PFOS] were used for firefighting.”⁵

GENERAL ALLEGATIONS

A. Plaintiff’s Use of and Exposure to PFAS-Containing Products

76. Plaintiff is a retired firefighter of approximately 31 years, who trained, lived, and worked at the Chanute Airforce Base in Rantoul, Illinois from approximately October 1977 to February 1978, and again in March 1980 to May 1984. Plaintiff resided and worked on the Eglin Air Force Base in Valparaiso, Florida from approximately March 1978 to March 1980. Plaintiff resided and worked on the Keesler Air Force Base in Biloxi, Mississippi from approximately June 1984 to May 1986. Plaintiff resided and worked on the Beale Air Force Base in Yuba County, California from approximately June 2005 to May 2012. Plaintiff also resided in close proximity to Naval Construction Battalion Center, Lackland Air Force Base, Ramstein Air Base, and Andrews Air Force Base at all times material to his PFAS exposure, and during his firefighter career, while stationed at these bases.

77. Plaintiff trained in turn out gear and used firefighting foam. Plaintiff wore turnout gear every shift, during training, and special events. Plaintiff used class B foam to fuel fires, oil fires, and aircraft fires.

78. As a firefighter and first responder, responsive to medical and other emergency calls, Plaintiff risked his life on a daily basis. He not only saved lives and homes, he provided emergency services and medical care, performed rescues, and offered support to people in

⁵ See "Fact Sheet PFOA & PFOS Drinking Water Health Advisories," EPA Document Number: 800-F-16-003, available at https://www.epa.gov/sites/default/files/2016-06/documents/drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf

traumatic circumstances. To prepare for this enormously challenging work, Plaintiff wore turnouts and received extensive and ongoing training in fire suppression (including the preparation, handling, and use of class B foam), fire prevention, rescue, and emergency medical care techniques to protect and/or minimize the loss of life, property, and damage to the environment.

79. For decades, Defendants, either individually or through their predecessors or subsidiaries, have manufactured, designed, sold, supplied, and distributed chemical feedstock and/or turnouts and Class B foam containing PFAS to firefighting training facilities and fire departments globally, including within the State of California, specifically in Madison County.

80. With over 5,000 individual chemicals, PFAS is a large and ever-growing category of human-made chemicals, consisting of a nearly indestructible chain of carbon and fluorine atoms that are widely used in products to, inter alia, resist and repel oil, heat and water, and have been found to have negative health effects. As detailed below, these toxic chemicals are present in firefighter turnouts and Class B foam.

(1) PFAS-Containing Turnout Gear

81. During firefighting training and when responding to fires and performing fire extinguishment, firefighters wear turnouts that are intended to provide a degree of thermal, chemical, and biological protection for a firefighter. Turnout gear components include individual components such as a helmet, hood, jacket, pants and suspenders, boots, and gloves. Each component of the jacket and pants are made of an outer layer, as well as several inner layers that include a moisture barrier and thermal liner which are meant to protect the firefighter from ambient heat.

82. PFAS chemicals are used in turnout gear to impart heat, water, and stain resistance to the outer shell and moisture barrier of turnout gear.

83. A June 2020 study of turnout gear by researchers at the University of Notre Dame analyzed 30 new and used turnout jackets and pants originally marketed, distributed and sold in 2008, 2014, and 2017, by six turnout gear makers, including Defendants MSA/Globe, Lion and Honeywell and found high levels of PFAS in turnout gear worn, used, or handled by firefighters, including the Firefighter Plaintiff.⁶

84. When exposed to heat, PFAS chemicals in the turnouts off-gas, break down, and degrade into highly mobile and toxic particles and dust,⁷ exposing firefighters to PFAS chemicals, particles and dust, including through skin contact/absorption, ingestion (e.g., hand-to-mouth contact) and/or inhalation.⁸ Further firefighter exposure to these highly mobile and toxic materials occurs through normal workplace activities, because particles or dust from their turnouts spread to fire vehicles and fire stations, as well as firefighters' personal vehicles and homes.⁹

85. Such workplace exposure to PFAS or PFAS-containing materials has been found to be toxic to humans. As far back as a July 31, 1980 internal memo, DuPont officials described measures that were needed to prevent workplace exposure to PFOA, which they knew could permeate all protective materials, and noted that PFOA's toxicity varied depending on the exposure pathway, acknowledging that ingestion was "slightly toxic," dermal contact was

⁶ Graham Peaslee et al., *Another Pathway for Firefighter Exposure to Per- and Polyfluoroalkyl Substances: Firefighter Textiles*, Environmental Science & Technology Letters 2020, 7, 8, 594-599 (Ecotoxicology and Public Health) (June 23, 2020) (hereinafter, "the Notre Dame Turnout Study").

⁷ A.S. Young et al., *Per- and Polyfluoroalkyl Substances (PFAS) and Total Fluorine in Fire Station Dust*, J. Expo. Sci. Environ. Epidemiology (2021), <https://doi.org/10.1038/s41370-021-00288-7>.

⁸ *Id.*

⁹ *Id.*

“slightly to moderately toxic” and inhalation was “highly toxic.”¹⁰ The memo concluded “continued exposure is not tolerable.”¹¹

86. As alleged herein, Plaintiff wears and/or wore turnouts in the ordinary course of performing his duties, as the turnouts were intended to be used and in a foreseeable manner, which exposed him to significant levels of PFAS.

87. Plaintiff did not know, and in the exercise of reasonable diligence could not have known, that the turnouts he wore or used in the course of performing his duties contained PFAS or PFAS-containing materials, and similarly did not know and could not have known that he routinely suffered exposure to PFAS or PFAS-containing materials in the turnouts he wore or used in performing their duties. The turnout gear worn or used by Plaintiff did not contain labeling information saying that the gear contains PFAS, and similarly did not warn Plaintiff of the health risks associated with exposure to PFAS.

(2) PFAS-Containing Class B Foam

88. Class B foam is one of the primary tools used by firefighters for suppression of fires and is particularly effective for extinguishing fires involving oil and/or chemicals common at transportation accidents, aircraft accidents, and chemical spills. Class B foam is also used in structural or other types of non-chemical fires when water cannot penetrate deeply enough to ensure that unseen fire is extinguished. The most common non-military Class B foam is aqueous film-forming foam (“AFFF”). AFFF and other Class B foams contain PFAS.

89. To use Class B foam, a Class B foam concentrate must first be mixed with water.

¹⁰ Robert Bilott, *Exposure*, 174 (2019).

¹¹ *Id.* at 175.

90. Class B foam concentrate is typically sold in five-gallon containers that firefighters are responsible for storing on the fire engine and/or pouring into the foam bladder of the fire engine. To mix the foam concentrate and water from a fire engine that is not pre-plumbed for foam, an educator must be placed in the foam concentrate to draw up the concentrate and mix it with water to create a thick, foamy substance. Firefighters are responsible for this process of preparing the foam, applying the foam and for cleaning the equipment (hoses, nozzles, etc.) after use.

91. The process of preparing and applying Class B foam, applying the foam, and then cleaning the equipment after foam use causes exposure to PFAS through skin contact, inhalation, or ingestion (e.g., hand-to-mouth contact). The Class B foam containers used by Plaintiff and their fire departments to mix and prepare the Class B foam for use did not say that the foam contains PFAS and did not warn Plaintiff of the serious health risks associated with exposure to PFAS.

92. Class B foam is used in fire extinguishment in a manner typical of routine methods of fire extinguishment—by being sprayed through a fire hose, appliance, or nozzle.

93. The techniques used for “laying a blanket” of Class B foam in fire extinguishment include banking the foam off a wall or vertical surface to agitate the foam before it covers the fire; or applying it to the ground surface where the fire is burning. In structure fires, it can also be necessary to spray the ceilings, walls and floors. Reapplication of foam is often necessary because the foam blanket will break down over a short time.



94. These techniques are used routinely in firefighting training as well as in real-world fire extinguishment, and result in firefighters being sprayed or entirely soaked with Class B foam, walking in and through Class B foam (which can reach thigh- or even waist-high), or kneeling in Class B foam during use – all as depicted in the exemplar photographs below. As a result, the techniques cause exposure to PFAS through skin contact, inhalation, or ingestion (e.g., hand-to-mouth contact).





95. As alleged herein, Plaintiff uses and/or was exposed to Class B foam in the ordinary course of performing his duties as it was intended to be used and in a foreseeable manner which exposed him to significant levels of PFAS.

96. Plaintiff did not know, and in the exercise of reasonable diligence, could not have known that the Class B foam he used and/or was exposed to in the course of performing his duties contained PFAS or PFAS-containing materials, and similarly did not know and could not have known that he routinely suffered exposure to PFAS or PFAS-containing materials in the Class B foam he used and/or was exposed to in performing their duties.

97. These exposures to PFAS or PFAS-containing materials resulted in serious and life-threatening diseases to Plaintiff, and continue to pose a significant health threat to him given the bioaccumulation, pervasiveness and persistence of PFAS.

B. The Chemical Structure of PFAS Makes Them Harmful to Human Health

98. PFAS are known as “forever chemicals” because they are immune to degradation, bio-accumulate in individual organisms and humans, and increase in concentration up the food

chain.¹² Indeed, scientists are unable to estimate an environmental half-life (i.e. the time it takes for 50% of the chemical to disappear) for PFAS.¹³ Additionally, some PFAS chemicals (known as “precursors”) degrade into different long-chain PFAS chemicals.¹⁴

99. PFAS are nearly indestructible and are highly transportable.¹⁵ PFAS exposure to humans can occur through inhalation, ingestion, or dermal contact.¹⁶

100. PFAS chemicals include “older” long-chain PFAS like PFOA, PFOS, and PFNA that have seven or more carbon atoms, and “newer” short-chain PFAS, like PFBA, PFBS, PFHxA, and PFHxS. The PFAS chemical industry has repeatedly asserted that short-chain PFAS are safer and bio-degrade more easily than long-chain PFAS. However, short-chain PFAS are molecularly similar to long-chain PFAS, and recent scientific research shows that short-chain PFAS are in fact extremely persistent, highly mobile and transportable, almost impossible to remove from water, bio-accumulate in humans and the environment, and show similar toxicity as long-chain

¹² *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*, National Institute of Environmental Health Sciences (last visited September 30, 2021), <https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>.

¹³ *Id.*

¹⁴ Robert Bilott, *Exposure*, at 174; Monica Amarello, *Study: Almost All Fluorine Detected in Fire Stations’ Dust Is From Unknown “Forever Chemicals,”* Environmental Working Group (February 5, 2021), <https://www.ewg.org/release/study-almost-all-fire-stations-dust-unknown-forever-chemicals>.

¹⁵ *Toxicological Profile for Perfluoroalkyls, see Relevance to Public Health*, Agency for Toxic Substances & Disease Registry, (last visited October 19, 2021), <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

¹⁶ *Id.* at 3-4; Ketura Persellin, *Study: PFAS Exposure Through Skin Causes Harm Similar to Ingestion*, Environmental Working Group (January 13, 2020).

PFAS.¹⁷ Short-chain PFAS also have lower technical performance and may therefore be used at higher quantities cancelling out any supposed benefits of lower bioaccumulation potential.¹⁸

101. In October 2021, the U.S. Environmental Protection Agency (“EPA”) updated its 2018 assessment of short-chain PFAS, also known as “GenX,” finding that two of Defendant Chemours GenX chemicals are more toxic than PFOA - the highly toxic chemical they were intended to to replace.¹⁹

102. In December 2022, in response to the alarming research on the dangers of these substances, Congress enacted the Protecting Firefighters from Adverse Substances (PFAS) Act, which directs federal agencies to develop best practices, training, and educational programs to reduce, limit and prevent exposure to PFAS.²⁰ The PFAS Act would include information for federal, state, and local firefighters on training and best practices to prevent and reduce exposure

¹⁷ Cheryl Hogue, *Short-chain and long-chain PFAS show similar toxicity*, *US National Toxicology Program says*, Chem. And Eng’g News, (August 24, 2019), <https://cen.acs.org/environment/persistent-pollutants/Short-chain-long-chain-PFAS/97/i33>; David Andrews, *FDA Studies: ‘Short-Chain’ PFAS Chemicals More Toxic Than Previously Thought*, Environmental Working Group (March 9, 2020), <https://tinyurl.com/y3lbq7by>; Stephan Brendel et al., *Short-chain Perfluoroalkyl Acids: Environmental Concerns and A Regulatory Strategy Under REACH*, *Env’t Sci. Eur.*, Vol. 30, 1 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5834591/>; Tom Neltner, *The Elephant in the Room: Potential Biopersistence of Short-Chain PFAS*, Environmental Defense Fund, (February 20, 2019), <http://blogs.edf.org/health/2019/02/20/potential-biopersistence-short-chain-pfas/>.

¹⁸ Martin Scheringer et al., *Helsingør Statement on Poly- and Perfluorinated Alkyl Substances* (PFASs), *Chemosphere* (June 14, 2014), <https://www.sciencedirect.com/science/article/pii/S004565351400678X>.

¹⁹ Cheryl Hogue, *US EPA Deems Two GenX PFAS Chemicals More Toxic than PFOA*, *Chemical & Engineering News* (October 28, 2021), <https://cen.acs.org/environment/persistentpollutants/US-EPA-deems-two-GenX-PFAS-chemicals-more-toxic-than-PFOA/99/i40>.

²⁰ Protecting Firefighters from Adverse Substances Act, Pub. L. No. 117-248, 136 Stat 2348 (2022).

to PFAS from firefighting foams and protective gear, as well as resources that identify alternatives for firefighting tools and equipment that does not contain PFAS.

103. On March 14, 2023, the EPA put forth their proposal to establish legally enforceable levels for PFAS known to occur in drinking water.²¹ The proposed regulation includes Maximum contaminant Levels (MCLs) which, if finalized, are legally enforceable regulatory drinking water standards. EPA establishes MCLs as close as feasible to the health based, non-enforceable, Maximum Contaminant Level Goal (MCLG), taking into consideration the ability to measure and treat to remove a contaminant, as well as the costs and benefits.²² The EPA proposes to set the MCLG at **zero** for PFOS and PFOA.²³

104. In addition to announcing the proposed MCLs, the EPA enclosed an updated EPA FAQ Sheet, which makes clear that it is EPA's current position that there is no safe level for PFOA and/or PFOS in drinking water. The EPA *determined PFOA and PFOS are likely carcinogens* (i.e., cancer causing) and that *there is no level of these contaminants that is without a risk of adverse health effects*.²⁴

105. Within the AFFF multi-district litigation, during the June 2019 Case Management Conference, the Court invited the parties to submit significant developments as they occur.²⁵

²¹ See Notice of Proposed Rulemaking, EPA-HQ-OW-2022-0114, <https://www.epa.gov/sdwa/and-polyfluoralkyl-substances-pfas>.

²² See 42 U.S.C. § 300g-1(b)(4)(B).

²³ *Id.*

²⁴ Proposed PFAS National Primary Drinking Water Regulation FAQs for Drinking Water Primacy Agencies, U.S. Env't Prot. Agency, (Mar. 2023), https://www.epa.gov/system/files/documents/2023-03/FAQs_PFAS_States_NPDWR_Final_3.14.23_0.pdf.

²⁵ *In re Aqueous Film-Forming Foams Prods. Liab. Litig.*, No. 2:18-mn-02873, ECF No. 129 (D.S.C. June 21, 2019)

Summarily, the Department of Justice submitted notice of the EPA rule proposals to the Court on March 14, 2023.²⁶

106. To date, there is no safe, acceptable or “normal” level of PFAS in the human body. Further, the fact that PFOA, PFOS, PFHxS, PFHpA, and PFNA are often found together presents a substantial risk to human health. Defendants’ assertions that their products are safe because they do not contain PFOA or PFOS, or because they contain short-chain PFAS is just another example of their efforts to deflect from the reality that there are thousands of PFAS – including precursor PFAS which degrade into PFOA and PFOS.²⁷

107. PFAS exposure affects nearly every system in the human body.²⁸ It has been associated with multiple and serious adverse health effects in humans including, but not limited to, cancer, tumors, liver damage, immune system and endocrine disorders, thyroid disease, ulcerative colitis, birth defects, decreased fertility, pregnancy-induced hypertension, accelerated changes in gene expression, and increases in oxidative stress which can contribute to DNA changes implicated in carcinogenesis, tumor promotion, and health conditions.²⁹ It has also been

²⁶ Letter from Christina M. Falk, Esq, U.S. Dep’t of Justice, Asst. Dir., Civil Division, Environmental Torts, regarding EPA Issues Notice of Propose Rulemaking for maximum Contaminant Levels Under the Safe Drinking Water Act, *In re Aqueous Film-Forming Foams Prods. Liab. Litig.*, No. 2:18-mn-02873, ECF No. 2903 (March 14, 2023).

²⁷ Technical Fact Sheet - Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA), U.S. Env’t Prot. Agency, (Nov. 2017), https://19january2021snapshot.epa.gov/sites/static/files/2017-12/documents/ffrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf.

²⁸ Kelly Lenox, PFAS Senate Hearing, Birnbaum’s Expert Scientific Testimony, Env’t Factor (May 2019), <https://factor.niehs.nih.gov/2019/5/feature/1-feature-pfas/index.htm>.

²⁹ A. Koskela et al., *Perfluoroalkyl substances in human bone: concentrations in bones and effects on bone cell differentiation*, Sci. Reps., (July 28, 2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5533791/pdf/41598_2017_Article_7359.pdf; National Toxicology Program Technical Report on the Toxicology and Carcinogenesis Studies of Perfluorooctanoic Acid Administered in Feed to Sprague Dawley (Hsd: Sprague Dawley SD) Rats, Nat’l Toxicology Program (May 2020), https://ntp.niehs.nih.gov/ntp/htdocs/lt_rpts/tr598_508.pdf; Jaclyn Goodrich et al., *Per- and*

found to concentrate in human blood, bones and organs, and to reduce the effectiveness of certain vaccines, a significant concern in light of the COVID pandemic.³⁰

C. Defendants Knowingly Manufactured, Developed, Marketed, Distributed, Supplied and/or Sold Toxic PFAS and/or Products Containing PFAS

108. Defendants have each marketed, developed, distributed, sold, promoted, manufactured, released, or otherwise used PFAS chemicals in products, including in PFAS-containing turnout gear and Class B foam, throughout the United States and in Illinois.

109. PFAS were first developed in the 1930s and 1940s. Soon after, 3M began manufacturing a PFAS material called perfluorooctanoic acid (“PFOA”), selling it to other companies, including DuPont.

110. By the 1950s, PFAS were widely used in large-scale manufacturing. Prior to this, PFAS had never been detected in nor were present in human blood or bodies.

111. In the 1960s, Class B foam containing PFAS entered the global market and became the primary firefighting foam all over the world with 3M as one of the largest manufacturers.

112. In the 1970s, Defendants National Foam and Tyco began to manufacture, market, and sell Class B foam containing PFAS, followed by Defendant Chemguard in the 1990s, and Defendant Buckeye in the 2000s.

113. Founded in 1918, Defendant MSA/Globe began manufacturing, marketing, and selling turnout gear with DuPont’s NOMEX® PFAS-containing flame resistant fabric in 1966.

Polyfluoroalkyl Substances, Epigenetic Age and DNA Methylation: A Cross-Sectional Study of Firefighters, 13 *Epigenomics* (October 21), <https://pubmed.ncbi.nlm.nih.gov/34670402/>.

³⁰ Koskela, *supra* note 27; Tasha Stolber, *PFAS Chemicals Harm the Immune System, Decrease Response to Vaccines, New EWG Review Finds*, Environmental Working Group (November 12, 2020), <https://www.ewg.org/news-and-analysis/2020/11/pfas-chemicals-harm-immune-systemdecrease-response-vaccines-new-ewg>.

MSA/Globe (under the Globe name) continues to manufacture, market, and sell turnout gear using PFAS-containing fabrics supplied by its partners, DuPont, Gore, Tencate, and PBI.³¹

114. Defendant Lion began to manufacture, market, and sell turnout gear in 1970. Since its founding, and continuing through to the present, Lion makes, markets, and sells turnout gear using PFAS-containing fabrics, including Teflon® F-PPE-treated thermal lining material supplied by Defendants DuPont's NOMEX® PFAS-containing flame/water/oil-resistant fabric, and moisture barrier fabrics supplied by Defendant Gore.³²

115. Defendant Honeywell acquired Norcross Safety Products LLC in 2008, entering the protective gear industry and becoming one of the leading manufacturers of turnouts. Honeywell makes, markets, and sells turnout gear using PFAS-containing fabrics, supplied by Defendants DuPont, Fire-Dex, Gore, PBI, StedFast and Tencate.

D. Defendants Know Exposure to PFAS Causes Serious Health Impacts

116. Defendants, including specifically 3M and DuPont, have long known about the serious and significant impacts to health caused by exposure to PFAS, having conducted study after study on the exposure and health effects of PFAS on animals, and in some cases, even on their own employees. The findings of these studies were discussed within the companies internally, yet were never made public or shared with any regulatory agencies. Among the findings:

- a) A 1950 3M study showed that PFAS could build up in the blood of mice and that PFAS could bind to proteins in human blood suggesting that PFAS would not only

³¹ See *Globe History*, Glose MSA Safety Wesbite, (last visited February 26, 2021), <http://globe.msasafety.com/history>; *Turnout Gear Materials*, Globe MSA Safety Website, (last visited February 26, 2021), <https://globe.msasafety.com/materials>.

³² See *Our History*, Lion Website (last visited September 29, 2021), <http://www.lionprotects.com/lion-history>; *Firefighter Turnoutus*, Lion Website (last visited September 29, 2021), <https://www.lionprotects.com/firefighter-turnout-gear#>.

remain, but also persist and accumulate in the body of the exposed individuals with each additional exposure.³³

- b) In 1961, a DuPont toxicologist warned that PFAS chemicals enlarge rat and rabbit livers.³⁴ A year later, these results were replicated in studies with dogs.³⁵
- c) In 1963, 3M's technical handbook classified PFAS as toxic and advised that "due care should be exercised in handling these materials."³⁶
- d) In 1970, a company that purchased 3M's firefighting foam had to abandon a test of the product because all the fish died.³⁷
- e) In the 1970s, DuPont discovered that there were high concentrations of PFOA in the blood samples of factory workers at DuPont's Washington Works site.³⁸
- f) By the end of the 1970s, studies performed by, at least 3M, indicated that PFAS materials were resistant to environmental degradation and would persist in the environment.³⁹
- g) In 1981, 3M, which still supplied PFOA to DuPont and other corporations, found that ingestion of PFOA caused birth defects in rats. 3M reported this information to DuPont. DuPont then tested the children of pregnant employees in their Teflon division and found that of seven births, two children had eye defects. Defendants reassigned the female employees, but did not inform the EPA or make this information public.⁴⁰

³³Timeline - *For 50 Years, Polluters Knew PFAS Chemicals Were Dangerous But Hid Risks From Public*, Env't Working Grp., (2019), <https://pfascentral.org/news/for-50-years-polluters-knew-pfas-chemicals-were-dangerousbut-hid-risks-from-public>; *see also*, Jared Hayes, *For Decades, Polluters knew PFAS Chemicals Were Dangerous But Hid Risks From Public*, (Aug. 29, 2019) <https://www.ewg.org/pfastimeline/>.

³⁴ *For 50 years*, *supra* note 31.

³⁵ Nathaniel Rich, *The Lawyer Who Became DuPont's Worst Nightmare*, New York Times (June 6, 2016), <https://www.nytimes.com/2016/01/10/magazine/the-lawyer-who-becameduponts-worst-nightmare.html>.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *PFCS: Global Contaminants: PFCs Last Forever*, Environmental Working Group, (April 3, 2003), <https://www.ewg.org/research/pfcs-global-contaminants/pfcs-last-forever>.

⁴⁰ *For 50 years*, *supra* note 31.

- h) In 1988, a company that purchased PFAS firefighting foam complained to 3M because the product was not biodegradable as 3M represented.⁴¹ Subsequently, a 3M employee wrote an internal memo that “3M should stop perpetrating the myth that these fluorochemical surfactants are biodegradable, but the company continued to sell them.”⁴²
- i) By at least the end of the 1980s, research performed by Defendants, including specifically, Defendants 3M and DuPont, manufacturing and/or using PFAS materials indicated that at least one such PFAS material, PFOA, caused testicular tumors in a chronic cancer study in rats, resulting in at least Defendant DuPont classifying such PFAS material internally as a confirmed animal carcinogen and possible human carcinogen.⁴³
- j) In the 1990s, Defendant DuPont knew that PFOA caused cancerous testicular, pancreatic and liver tumors in lab animals. One study also suggested that PFOA exposure could cause possible DNA damage.⁴⁴

Another study of workers found a link between PFOA exposure and prostate cancer.⁴⁵

- k) In response to the alarming and detrimental health impact, DuPont began to develop an alternative to PFOA and in 1993, an internal memo announced that “for the first time, we have a viable candidate” that appeared to be less toxic and showed less bioaccumulation.⁴⁶ DuPont decided against using this potentially safer alternative, however, because products manufactured with PFOA were worth \$1 billion in annual profit.⁴⁷
- a. On June 30, 2000, 3M and DuPont met to share 3M’s “pertinent data on PFOA”. 3M informed DuPont that the half-life of PFOA was much longer than animal studies showed.⁴⁸

⁴¹ *The Devil They Knew: PFAS Contamination and the Need for Corporate Accountability, Part II*, Transcript of Hearing Before the Subcommittee on Environment of the Committee on Oversight and Reform, House of Representatives (September 19, 2019), <https://docs.house.gov/meetings/GO/GO28/20190910/109902/HHRG-116-GO28-Transcript20190910.pdf>.

⁴² *Id.*

⁴³ *For 50 years, supra* note 31.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ Internal DuPont Memorandum, DuPont Haskell Laboratory Visit (June 30, 2000), <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1721.pdf>.

117. Additionally, approximately fifty years of studies by Defendants, including by 3M and DuPont, on human exposure to PFAS found unacceptable levels of toxicity and bioaccumulation, as well as a link to increased incidence of liver damage, various cancers, and birth defects in humans exposed to PFAS.⁴⁹ These studies also revealed that, once in the body, PFAS has a very long half-life and that it takes years before even one-half of the chemicals begins to be eliminated from the body—assuming, of course, the body experiences no additional PFAS chemical exposure.

118. In the face of these findings, and despite passage of the Toxic Substances Control Act in 1976, which requires companies that manufacture, process or distribute chemicals to immediately report to EPA information that “reasonably supports the conclusion” that a chemical presents a substantial risk to health or the environment, Defendants did not inform the EPA, Plaintiff, or the public about the health impacts resulting from exposure to PFAS.⁵⁰ Indeed, in at least some instances, Defendants’ own attorneys advised the companies to conceal their damaging findings on PFAS, which they did for decades.⁵¹

119. In 2000, 3M announced that it would cease manufacturing a specific PFAS chemical, PFOS, as well as Class B foam, on the same day the EPA announced that PFOA and PFOS, two chemicals in the PFAS family, had a “strong tendency to accumulate in human and animal tissues and could potentially pose a risk to human health and the environment over the long term.”⁵²

⁴⁹ *For 50 years, supra* note 31.

⁵⁰ *Id.*

⁵¹ *The Devil They Knew, supra* note 39.

⁵² *EPA and 3M Announce Phase Out of PFOS*, Press Release, United States Environmental Protection Agency (May 16, 2000), https://archive.epa.gov/epapages/newsroom_archive/newsreleases/33aa946e6cb11f35852568e1005246b4.html.

120. However, 3M did not recall PFOS, its chemical feedstock, or any Class B foam that it had previously manufactured, sold, or distributed, or that was then stored at firehouses and being used by firefighters around the country. And no other Defendant stopped manufacturing PFAS chemicals or products containing PFAS. Rather, Defendants continued to manufacture, develop, market, promote, distribute, and sell PFAS chemicals and PFAS-containing products, including specifically PFAS-containing turnouts, and Class B foams and did so without any warning to firefighters or to the public concerning the fact that these turnouts and foams contained PFAS, or that they posed a serious health risk to human health. Defendants instead continued to claim their products were safe.

86. By the 2000s, Defendants' own research of its employees revealed multiple adverse health effects among workers who had been exposed to PFAS, including increased cancer incidence, hormone changes, lipid changes, and thyroid and liver impacts.⁵³

87. In 2001, a class action lawsuit was filed in West Virginia against DuPont on behalf of people whose water had been contaminated by the nearby DuPont chemical plant where PFAS chemicals were manufactured.

88. Defendants continued to manufacture, market, promote, distribute, and/or sell PFAS and PFAS-containing products, including turnouts and Class B foam, and continued to publicly claim that these products were safe. Defendants affirmatively suppressed independent research on PFAS, and instead commissioned research and white papers to support their claims that PFAS and PFAS-containing products were safe to use, engaging consultants to further this strategy and ensure that they would continue to profit from these toxic chemicals and products.

⁵³ For 50 years, *supra* note 31.

89. As one consultant wrote in pitching its services to DuPont, it was critical that the PFAS industry develop an aggressive strategy to “[discourage] governmental agencies, the plaintiff’s bar and misguided environmental groups” and “[implement] a strategy to limit the effect of litigation and regulation on the revenue stream generated by PFOA.” The strategy was further described by consultant as follows:

DUPONT MUST SHAPE THE DEBATE AT ALL LEVELS. . . . The outcome of this process will result in the preparation of a multifaceted plan to take control of the ongoing risk assessment by the EPA, looming regulatory challenges, likely litigation, and almost certain medical monitoring hurdles. The primary focus of this endeavor is to strive to create the climate and conditions that will obviate, or at the very least, minimize ongoing litigation and contemplated regulation relating to PFOA. ***This would include facilitating the publication of papers and articles dispelling the alleged nexus between PFOA and teratogenicity as well as other claimed harm.*** We would also lay the foundation for creating Daubert precedent to discourage additional lawsuits.⁵⁴

121. Class B foam manufacturers and distributors adopted a similarly aggressive industry campaign to evade government oversight or public attention of the risks posed by their products. At a March 2001 meeting of the National Fire Protection Association’s Technical Meeting on Foam, which included Defendant Class B foam manufacturers Tyco, Chemguard and National Foam, a 3M representative informed attendees that 3M had discontinued its Class B foam business, citing concerns about the “proven pervasiveness, persistence and toxicity” of PFOS.⁵⁵ Attendees also were informed of evidence that telomer-based fluorosurfactants (used by every Class B foam manufacture except 3M) degrade to PFOA and, worse, exhibit an even greater degree of pervasiveness and toxicity than PFOA.

⁵⁴ Letter from P. Terrence Gaffney, Esq of The Weinberg Group to Jane Brooks, Vice President, Special Initiatives, DuPont de Nemours & Company, regarding PFOA (April 29, 2003).

⁵⁵ NFPA-11 Technical Committee Meeting Notes (National Fire Protection Association for Standards on Low-, Medium- and High-Expansion Foam) (March 14-15, 2001), <https://assets.documentcloud.org/documents/4178280/NFPA-Schedule.pdf>.

122. On or about the same time, certain Defendants, including at least Tyco, DuPont, and Buckeye, founded and/or became members of the Fire Fighting Foam Coalition (“FFFC”) – a non-profit organization of manufacturers, distributors, and suppliers of Class B foam (specifically AFFF). The FFFC’s self-described role was to be “the environmental voice for users and manufacturers of AFFF”⁵⁶ – one designed to ignore the health impacts of exposure to PFAS containing Class B foams such as AFFF:

Not too long ago, 3M had environmental concerns about a chemical in their product and decided to withdraw from the AFFF market. Even though no other manufacturers used the questionable chemical, the withdrawal of 3M from AFFF production raised a red flag. As a direct result, a lot of half-truths and misinformation published by some well-meaning, but misinformed, groups began to surface. One organization went so far as to label our products as "hazardous waste" and as posing an "occupational health or environmental hazard." At the same time, the Federal government was focusing its attention on the industry and needed to identify an industry representative that could provide fact-based information and serve as a focal point for dialogue. We decided, therefore, to form the FFFC in order to educate, inform and help persuade regulatory and legislative decision-makers that firefighting foams are a value-added component to any firefighting capability.⁵⁷

123. Defendants also pivoted with a new industry strategy. Defendants continued to produce Class B foams containing PFAS and continued to publicly represent that PFAS and/or products containing PFAS were safe, while developing newer, “short-chain” PFAS alternatives.

124. In 2005, the EPA fined DuPont \$16.5 million for failing to submit decades of toxicity studies of PFOA (one PFAS chemical manufactured by the company).⁵⁸ In the face of and

⁵⁶ Fire Fighting Foam Council Website (last visited September 29, 2021), <https://www.fffcc.org/afff-update>.

⁵⁷ *Id.* at <https://web.archive.org/web/20020811142253/http://www.fffcc.org/about.html> (captured August 11, 2002).

⁵⁸ Michael Janofsky, *DuPont to Pay \$16.5 Million for Unreported Risks*, New York Times (December 5, 2005), <https://www.nytimes.com/2005/12/15/politics/duPont-to-pay-165-millionfor-unreported-risks.html>.

undeterred by the EPA's action, Defendant turnout manufacturers, such as MSA/Globe and Lion, partnered with DuPont and with Defendant Gore to develop, manufacture, market, distribute and/or sell turnouts made with DuPont's and/or Gore's PFAS-based textile coatings (e.g., Nomex® and Gore® Protective Fabrics).⁵⁹

125. In 2006, the EPA "invited" eight PFOA manufacturers, including Defendants DuPont, 3M, and Arkema to join in a "Global Stewardship Program" and phase out production of PFOA by 2015.⁶⁰

126. By this time, Defendants had begun to aggressively manufacture, market, sell and/or distribute short-chain PFAS, such as Gen X, claiming that these alternative PFAS chemicals did not pose significant health risks to humans or the environment. But, these claims, too, were false. Defendants knew that certain of these short-chain PFAS chemicals had been found in human blood, and that at least one of them produces the same types of cancerous tumors (testicular, liver, and pancreatic) in rats as had been found in long-chain PFAS studies.⁶¹

127. In 2011, a C8 Science Panel convened as part of a settlement in the West Virginia DuPont water contamination case described in paragraph 92, above, began releasing its findings. The Panel had analyzed the blood serum of nearly 70,000 residents living in the water

⁵⁹ *DuPont and LION Collaborate to Better Protect Firefighters and First Responders*, Press Release, DuPont and LION (January 30, 2013), https://www.prweb.com/releases/dupont_protection_tech/lion_turnout_gear/prweb10362363.htm; *Our Partners*, Globe Website (last visited February 13, 2022), <https://globe.msasafety.com/ourpartners>; and *Firefighter & Emergency Response Protection*, DuPont Website (last visited February 26, 2021), <https://www.dupont.com/personal-protection/firefighter-protection.html>.

⁶⁰ *PFOA Stewardship Program*, United States Environmental Protection Agency (last visited February 13, 2022), <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/riskmanagement-and-polyfluoroalkyl-substances-pfas#tab-3>.

⁶¹ Sharon Lerner, *New Teflon Toxin Causes Cancer in Lab Animals*, The Intercept (March 3, 2016), <https://theintercept.com/2016/03/03/new-teflon-toxin-causes-cancer-in-lab-animals/>.

contamination area for two long-chain PFAS (PFOA and PFOS), and found significant negative human health effects (including, kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, high cholesterol, and preeclampsia) associated with exposure to these PFAS chemicals in the area groundwater.

128. In 2013, DuPont entered an agreement with the EPA and ceased production and use of PFOA – just one of thousands of PFAS chemicals the company makes, promotes, and sells. Defendants, however, continued manufacturing short-chain PFAS materials, chemical feedstock, and products—all the while peddling them as safer, and as more easily bio-degraded than long-chain PFAS, despite evidence to the contrary.⁶²

129. In 2015, DuPont spun-off its PFAS chemicals business, as well two-thirds of its environmental liabilities and 90% of its active litigation, to Defendant Chemours. As part of the transaction, DuPont required Chemours to indemnify the “new” DuPont for all assigned environmental liabilities should a regulatory agency or plaintiff seek to hold the “new” DuPont accountable. As Chemours President Paul Kirsch testified before Congress: “DuPont designed the separation of Chemours to create a company where it could dump its liabilities to protect itself from environmental cleanup and related responsibilities.”⁶³

130. In June 2018, the Agency for Toxic Substances and Disease Registry (ASTDR), a division of the Centers for Disease Control and Prevention at the US Department of Health and Human Services released an 852-page draft toxicology report analyzing scientific data about the most common PFAS chemical variants, finding that PFAS “are potentially more hazardous than

⁶² Hogue, *supra* note 15; see Neltner, *supra* note 15.

<http://blogs.edf.org/health/2019/02/20/potential-biopersistenceshort-chain-pfas/>.

⁶³ *The Devil They Knew*, *supra* note 39.

previously known, are particularly concerning because of these compounds' persistence in the environment and widespread prevalence—PFAS are extremely slow to biodegrade.”⁶⁴

131. In September 2019, DuPont chief operations and engineering officer Daryl Roberts testified before Congress that the “new DuPont” (to be distinguished from the “Old DuPont” which manufactured and sold PFAS for decades before being spun-off to Chemours) no longer uses or manufactures PFAS and is no longer responsible for obligations and harms resulting from over 65 years of producing PFAS.⁶⁵ Roberts remarked that he knew nothing about “Old DuPont’s” efforts to suppress research on PFAS’ toxicity - as testified to by one of DuPont’s former scientists only a few days earlier.⁶⁶ Finally, he stated that any liabilities from “Old DuPont’s” PFAS operations were now Chemours’ problem because DuPont is essentially a completely new company with no past – only a bright future of doing good in the world.⁶⁷

E. Defendants Failed to Warn Plaintiff of the Dangers of Exposure to PFAS and Falsely Represented That Their PFAS Products Were Safe

132. As alleged above, Defendants knew that PFAS are persistent, toxic, and bioaccumulating with a very long half-life. They knew that exposure to PFAS can cause serious and life-threatening diseases, including cancer.

133. Yet, Defendants *did not warn* Plaintiff that PFAS and Defendants’ PFAS containing products, including turnouts and Class B foams used by Plaintiff, contained PFAS, or that exposure

⁶⁴ *A Toxic Threat: Government Must Act Now on PFAS Contamination at Military Bases*, Center for Science and Democracy (September 2018), <https://www.ucsusa.org/sites/default/files/attach/2018/09/a-toxic-threat-pfs-military-fact-sheetucs-2018.pdf>.

⁶⁵ *The Devil They Knew*, *supra* note 39.

⁶⁶ *Id.*

⁶⁷ *Id.*

to PFAS in the normal and intended use of such products, causes serious bodily harm and illnesses, including cancer.

134. Instead, Defendants falsely represented—and continue to falsely represent—that PFAS and PFAS-containing products, including turnouts and Class B foams, are safe and not harmful to humans or the environment.

135. Such assertions fly in the face of science and a global movement toward eliminating this class of chemicals from consumer products. In 2020, for example, Congress passed legislation to address PFAS in turnouts and foam,⁶⁸ and numerous states have severely restricted and/or banned PFAS-containing firefighting foam. For example, California will require sellers of turnout gear to notify purchasers if it contains PFAS, while Colorado has banned PFAS-containing turnouts as of 2022.⁶⁹ The U.S. Food and Drug Administration similarly has called for phasing out of short-chain PFAS that contain 6:2 fluorotelomer alcohol (6:2 FTOH).⁷⁰ And private companies like

⁶⁸ Ryan Woodward, *Congress Passes Legislation to Address PFAS Chemicals Impacting Firefighters*, Fire Rescue 1, (December 17, 2020), <https://www.firerescue1.com/legislationfunding/articles/congress-passes-legislation-to-address-pfas-chemicals-impacting-firefightersSp8MFif5dAbD4ZrI/>.

⁶⁹ Andrew Wallender, *Toxic Firefighting Foam With PFAS Scrutinized by Multiple States*, Bloomberg Law (June 18, 2020), <https://news.bloomberglaw.com/pfas-project/toxic-firefighting-foam-with-pfas-scrutinized-by-multiple-states>; Cheryl Hogue, *California Bans PFAS Firefighting Foams*, Chemical & Engineering News (October 1, 2020), [https://cen.acs.org/environment/persistent-pollutants/California-bans-PFAS-firefightingfoams/98/i38#:~:text=California%20is%20halting%20the%20sale,US%20market%20to%20do%20so](https://cen.acs.org/environment/persistent-pollutants/California-bans-PFAS-firefightingfoams/98/i38#:~:text=California%20is%20halting%20the%20sale,US%20market%20to%20do%20so;); Marianne Goodland, *While Dozens of Bills Are Getting Axed, A Bill on Firefighting Chemicals Sails On*, Colorado Politics (May 28, 2020), https://www.coloradopolitics.com/legislature/while-dozens-of-bills-are-getting-axed-a-bill-on-firefighting-chemicals-sails-on/article_1b1e05f2-a11e-11ea-a270-230a36e06594.html; *Legislature Takes Strongest Stand Yet to Phase out PFAS in Firefighting Foam*, Washington State Council of Fire Fighters (March 5, 2020), <https://www.wscff.org/legislature-takes-strongeststand-yet-to-phase-out-pfas-in-firefighting-foam/>.

⁷⁰ *FDA Announces the Voluntary Phase-Out by Industry of Certain PFAS Used in Food Packaging*, U.S. Food and Drug Administration, (July 31, 2020), <https://www.fda.gov/food/cfsanconstituent-updates/fda-announces-voluntary-phase-out-industry-certain-pfas-used-foodpackaging>.

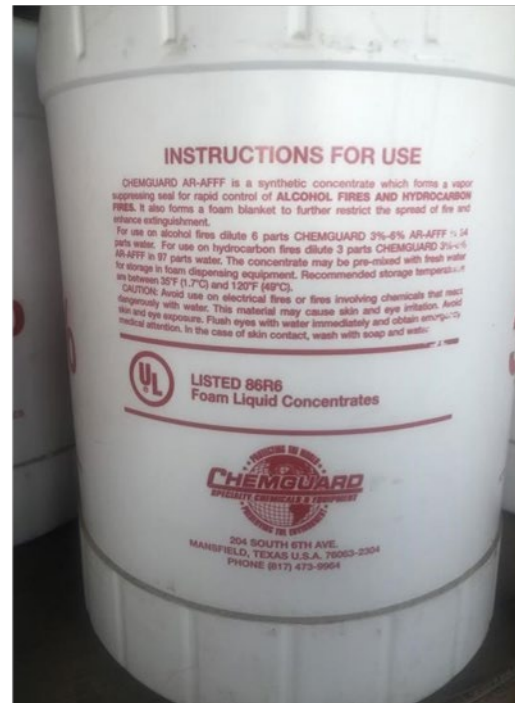
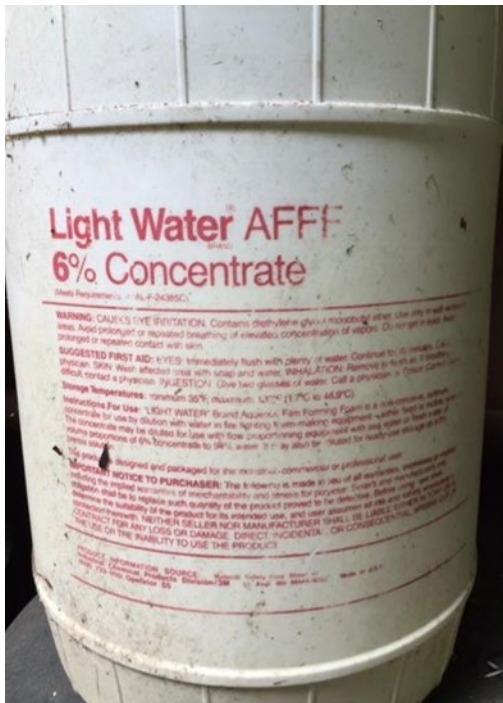
Home Depot, Lowes and Staples recently have begun to discontinue selling products containing any PFAS, as have several outdoor, durable clothing companies (e.g. Columbia and Marmot), clothing retailers (e.g. H&M, Levi Strauss & Co), shoe companies (e.g. Adidas and New Balance), car seat manufacturers (e.g. Britax and Graco), furniture companies (e.g. IKEA), personal care companies (e.g. Johnson & Johnson and Oral-B), and textile manufacturing companies.⁷¹

(1) Defendants Provide No Safety Warnings on Product Labels

136. Plaintiff alleges that the packaging on the PFAS-containing Class B foam containers used for mixing Class B foam with water, and for spraying and laying foam blankets for fire suppression or fire suppression training, contained no warning that the Class B foam contained PFAS. Nor did it inform persons handling or using the foam as it was intended to be handled that such use can result in exposure to PFAS and serious bodily harm.

137. Below are photos typical of the Class B foam containers manufactured, marketed, distributed, or sold by Defendants that Plaintiff was potentially exposed to in training or in fire suppression during his firefighting career. The labels on the containers warn only of possible skin or eye irritation, and suggest rinsing areas of contact with water. They contain ***no information*** about the Class B foam containing PFAS or PFAS-containing materials, and provide ***no warning whatsoever*** of the human health risks and serious health conditions associated with PFAS exposure resulting from the normal and intended use of Class B foam in fire suppression or fire suppression training.

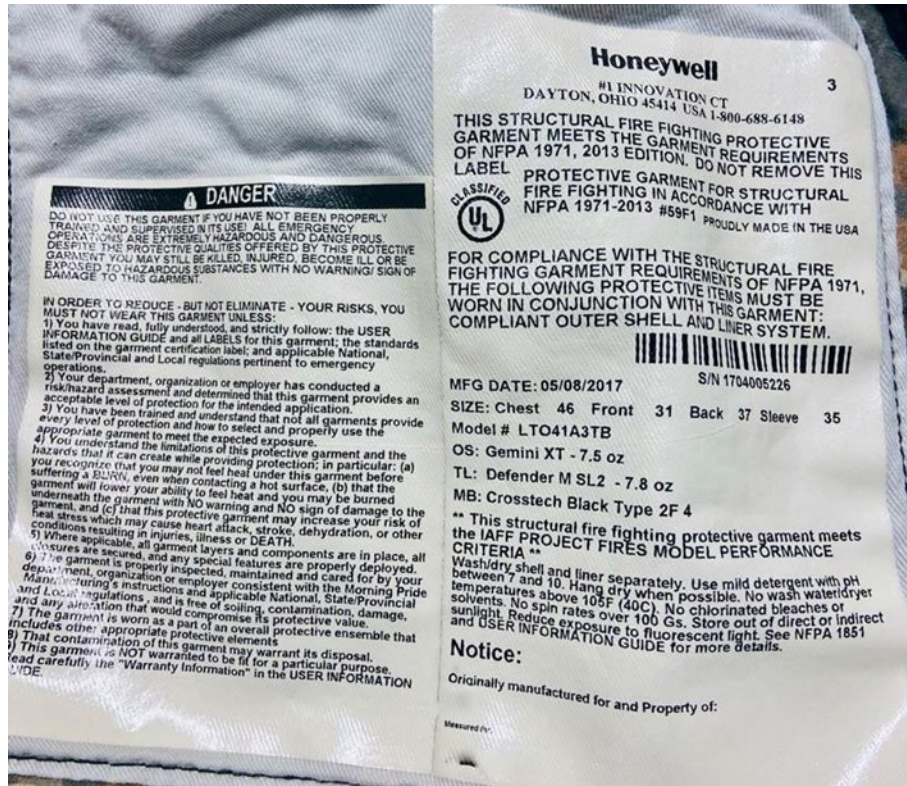
⁷¹ Muhannad Malas, *Home Depot, Lowe's and Staples Take Action to Protect Their Customers from PFAS and Other Harmful Toxics Lurking in Carpets and Office Supplies*, Environmental Defence (November 5, 2019), <https://environmentaldefence.ca/2019/11/05/home-depot-lowesstaples-protect-customers-toxics/>; *PFAS-Free Products*, PFAS Central, (last visited February 15, 2021), <https://pfascentral.org/pfas-free-products/>.



138. Plaintiff further alleges that turnouts containing PFAS or PFAS materials sold by Defendants, and used by Plaintiff in training, emergency incidents, or in fire suppression during his firefighting career, also contained no warning that the turnouts contain PFAS or PFAS materials. Nor did these labels inform persons handling, wearing, or using the turnouts as they were intended to be handled, worn, or used can result in exposure to PFAS and serious bodily harm.

139. Below are photos typical of the warning labels for turnouts manufactured, marked, sold, and distributed by Defendants Honeywell and Lion. As depicted below, the labels do not disclose that the PFAS or PFAS materials in the turnouts are toxic, and contain no warning that handling, wearing, or using the turnouts as they were intended to be handled, worn, or used can result in exposure to PFAS and serious bodily harm. Further, while the labels provide washing instructions, the instructions do not advise that turnouts should be washed in a commercial

extractor to prevent cross-contamination and PFAS-exposure to family members who handle or wash the turnouts with other garments in home washing machines.



Garment Safety Label

⚠ DANGER	
6150	
<p>You must read and understand these warnings and instructions. Failure to follow these warnings and instructions will result in serious injury or death.</p> <ul style="list-style-type: none"> • Wear this garment ONLY FOR FIREFIGHTING ACTIVITIES. • THIS GARMENT DOES NOT PROVIDE PROTECTION AGAINST CBRN TERRORISM AGENTS. • Before wearing this garment, you must read and understand the User Instruction, Safety and Training Guide provided with this garment. The guide explains: 1. critical safety information and protective clothing limitations. 2. proper sizing/adjustment. 3. procedures for putting on and removing protective clothing. 4. how to clean, decontaminate, inspect and store this garment. 5. use consistent with NFPA1500. 6. limitations on useful life and retirement procedures. • You should wear this garment only if you have been properly trained in firefighting techniques, and have knowledge of the proper selection, fit, use, care and limitations of protective clothing and equipment. • To obtain a free user guide, write Lion @ 7200 Poe Ave., Suite 400 Dayton, OH 45414 or call 1-800-421-2926. • This garment provides limited protection against heat and flame. Minimize exposure to heat. You may be burned without warning or without receiving damage to garment. Avoid contact with hot objects. Skin burns occur when skin reaches a temperature of 118°F. Fires burn at temperatures up to 2000°F. • Moisture and/or compression in your garment may reduce protection. • Exertion in hot conditions may result in heat exhaustion or poor judgment. If you feel dizziness, dehydration, loss of focus, or shortness of breath, get to a safe area, remove this garment, and seek medical attention. • Do not use this garment if it is damaged or dirty; garments will NOT provide the intended protection. ALWAYS follow manufacturer's cleaning instructions. • This garment has limited useful life. You must inspect regularly and retire when appropriate according to the User Instruction, Safety and Training Guide. See also NFPA 1851. <p style="text-align: center;">DO NOT REMOVE OR WRITE ON THIS LABEL!</p>	

Garment Cleaning Label

 <p>LION</p>	<p>Questions, write or call immediately: Lion 7200 Poe Ave., Suite 400 Dayton, OH 45414. 1-800-421-2926</p>	6484
<p>CLEANING AND STORAGE INSTRUCTIONS</p> <ul style="list-style-type: none"> • Users must clean, inspect, maintain, store and alter only in accordance with the User Instruction, Safety and Training Guide. • Never use chlorine bleach. Chlorine bleach will significantly compromise the protection afforded by textile and film materials utilized in the construction of this garment. • For coats only, remove DRD and launder DRD by hand washing with mild detergent and warm water. • Fasten all hooks and D-rings and turn inside out or place in a laundry bag. • Machine wash, warm water, using only liquid detergent and if needed, liquid non-chlorine bleach. Double rinse in cool water. Never use fabric softeners. • Never dry clean. • Dry by hanging in open area, out of direct or indirect sunlight and fluorescent light. • Store out of direct or indirect sunlight and fluorescent light. <p>THIS STRUCTURAL FIRE FIGHTING PROTECTIVE GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA1971, 2013 EDITION.</p> <p>PROTECTIVE GARMENT FOR STRUCTURAL FIRE FIGHTING IN ACCORDANCE WITH NFPA 1971-2013. 58F6</p> <p>When worn with the inner liner and outer shell assembled together, this garment meets the personal protective equipment criteria of US Dept. of Labor OSHA Bloodborne Pathogens Standard, Title 29 CFR, Part 1910.1030, and CAL-OSHA Standard Title 8 Section 3406.</p> <p style="text-align: center;">DO NOT REMOVE OR WRITE ON THIS LABEL</p> <p>Rev 1.0 12112</p>		

Garment Information Label


<p style="text-align: center;">Janesville</p> <p>CROSSTECH MOISTURE BARRIER (PTFE) GLIDE ZL ARAFLO E-89 (K) THERM LINER</p> <p>NOMEX E-99 QUILT</p> <p>REQ-401971</p> <p>MFG DATE: 10/5/2012</p> <p>CUT: 104246AA006</p> <p>MODEL: CVFM</p> <p>LINER: C2K7CVFM</p> <p>SIZE: 4632R</p> <p style="text-align: center;"></p> <p style="text-align: center;">0000652642</p>

Garment Liner Attachment Safety Label

⚠ WARNING	
<p>FOR COMPLIANCE WITH THE STRUCTURAL FIRE FIGHTING GARMENT REQUIREMENTS OF NFPA 1971, THE FOLLOWING PROTECTIVE ITEMS MUST BE WORN IN CONJUNCTION WITH THIS GARMENT: OUTER SHELL 7.0 OZ MINIMUM WEIGHT</p>	
<p>This INNER LINER alone does not provide protection against heat, flame, chemical or biological hazards. NEVER wear this INNER LINER without the SAME SIZE AND MODEL OUTER SHELL, as identified on labels located on each detachable component.</p> <p>To reduce the risk of injury or death, you must assemble and wear together ALL of the following items: 1. protective coat and pant with outer shell, attached inner liner and DRD installed in coat 2. gloves 3. boots 4. helmet with eye protection 5. protective hood 6. SCBA 7. PASS device ALWAYS make sure that all ensemble layers have the proper overlap and that all items fit with adequate looseness. Tight fit lowers insulation protection and restricts mobility.</p> <p style="text-align: center;">MADE IN THE U.S.A.</p> <p style="text-align: center;">DO NOT REMOVE OR WRITE ON THIS LABEL!</p> <p style="text-align: right;">FW 6151</p>	

Draag Rescue Device (DRD) Label

(2) Defendants' MSDS Sheets Do Not Warn About PFAS or PFAS Exposure

140. A Material Safety Data Sheet (or "MSDS") is a document that Occupational Safety and Health Administration (OSHA) requires companies to provide to end users for products that contain substances or chemicals that are classified as hazardous or dangerous. Access to such information is necessary for Plaintiff to provide a safe and effective response in emergency situations.

141. The MSDS provided with Defendants' Class B foams did not – and to this day do not – state that these foams contain PFAS or PFAS-containing materials; that PFAS is persistent, toxic and bio-accumulating; or that PFAS exposure causes serious bodily harm. To the contrary,

the MSDS falsely stated that the Class B foams and/or their contents were not known carcinogens and did not cause birth defects.

142. Even now, the MSDS do not reflect the known serious health risks and hazards associated with exposure to PFAS in these Class B foams. For example, a MSDS updated on as recently as May 19, 2021 by Defendant National Foam for AFFF stated the product *was not considered carcinogenic* - contrary to decades of science.⁷²

**(3) Defendants' Fraudulent Concealment and Misrepresentations About PFAS
Continue to this Day**

143. Despite their decades of knowledge about PFAS and its dangers, Defendants continue to make false claims, continue to misrepresent the safety of PFAS, and continue to minimize and fail to warn about the hazards of exposure to PFAS, or turnouts and Class B foams made with or containing PFAS.

144. As alleged above, Defendants' misinformation campaign is long-standing, and continues to this day. Some pertinent examples include:

- a. 2018 – The National Fire Protection Association (which maintains committees on foams and turnouts that are comprised, in part, of certain Defendants) issued a publication listing 11 ways to minimize risk of occupational cancer – the suggestions centered on wearing turnouts for protection resulting from combustion or spills, and cleaning turnouts after exposure to chemicals. There was not a single mention of avoiding contact with foam and/or the risks of wearing turnouts containing PFAS or PFAS-containing materials.⁷³

⁷² National Foam Safety Data Sheet for Centurion (TMC6) 6% Aqueous Film Forming Foam Concentrate (AFFF) (May 19, 2021), https://nationalfoam.com/wpcontent/uploads/sites/4/NMS340_Centurion-6-AFFF-Concentrate_052192021.pdf.

⁷³ *11 Best Practices for Preventing Firefighter Cancer Outlined in New Report Put Out by VCOs and NVFC*, National Fire Protection Association Xchange (August 16, 2018), <https://community.nfpa.org/community/nfpa-today/blog/2018/08/16/11-best-practices-forpreventing-firefighter-cancer-outlined-in-new-report-put-out-by-vcos-and-nvfc>.

- b. 2019 – Defendant Lion issued a Customer Safety Alert for PFOA and Turnout Gear stating: “Your Lion turnout gear continues to be safe and ready for action especially when properly maintained. It is extremely important that firefighters continue to wear and properly care for their gear to stay safe on the job.”
- c. 2019 – Defendant 3M Vice President, Denise Rutherford, testified before Congress that she *absolutely agreed with the statement that “the weight of current scientific evidence does not show that PFOS or PFOA cause adverse health effects in humans at current rates of exposure.”* (emphasis added).⁷⁴
- d. 2019 - The Fire Fighting Foam Council (of which many Defendants have been members of since its inception in 2001) wrote in their newsletter that: “Shortchain (C6) fluor surfactants do not contain or breakdown in the environment to PFOS or PFOA and are currently considered lower in toxicity and have significantly reduced bio-accumulative potential than long-chain PFAS.”⁷⁵
- e. 2019 – Defendant Gore issued a public statement, stating that “the potential exposures and associated risks of cancer effects from PFOA alternative and non-polymeric perfluoroalkyl substances in Gore Components [turnout gear] are insignificant.”⁷⁶
- f. 2020 - FluoroCouncil – the lobbying arm of the PFAS industry – maintains that PFAS fluorotelomers that are in Class B foam and turnouts do not cause cancer, disrupt endocrine activity, negatively affect human development or reproductive systems, do not build up in the human body, and do not become concentrated in the bodies of living organisms.⁷⁷
- g. 2020 – The Fire Fighting Foam Council website states: “The short-chain (C6) fluorosurfactants that have been the predominant fluorochemicals used in

⁷⁴ Gabe Schneider, *3M Grilled over PFAS Chemicals at Congressional Hearing*, MinnPost (September 11, 2019), <https://www.minnpost.com/national/2019/09/3m-grilled-over-pfaschemicals-at-congressional-hearing/>.

⁷⁵ AFFF Update Newsletter, Fire Fighting Foam Coal. (April 2019), <https://tinyurl.com/y57c5jwx>.

⁷⁶ W. L. Gore and Associates, *Exposure Assessment and Cancer Risk Characterization for Firefighters from Non-Polymeric PFAS Residuals in Gore Components Used in Firefighting Gear*, (August 20, 2019), <https://www.goretexprofessional.com/sites/tof/files/pdfs/Firefighter%20Exposure%20Assessment%20Short%20Chain%20Non%20Polymer%20Residual.pdf>.

⁷⁷ *FluoroCouncil PFAS Information*, Glob. Indus. Council for FluoroTechnology, (August 23, 2019) <https://portal.ct.gov/DEEP/Remediation--Site-Clean-Up/PFAS-Task-Force/Pollution-Prevention-Committee>.

fluorotelomer-based AFFF for the last 25 years are low in toxicity and not considered to be bio-accumulative based on current regulatory criteria.”⁷⁸

- h. 2020 – The Fire Fighting Foam Council’s Best Practice Guidance for Use of Class B Foam - which was published in May 2016 and has not been updated to reflect the latest research - focuses entirely on eliminating and containing foam to minimize impact on the environment. It makes no mention of how to minimize the impact on firefighters who routinely handle, prepare, spray, or use Class B foam during training or in firefighting.⁷⁹
- i. 2020 – Defendant Lion’s hired consultant Paul Chrostowski, PhD took out a full-page in a fire service trade publication, Firefighter Nation, to argue that turnout gear is completely safe and any evidence to the contrary, including the Notre Dame study, is unreliable and fear-mongering. “[E]ven if PFAS were found in their turnout gear, at this time there is no credible evidence that it ends up in firefighters’ bodies in amounts that would be higher than the general population.... the connection between PFAS and cancer is extremely weak. The few peer-reviewed epidemiological studies that have found an association were not statistically significant and inconsistent with other studies.... The materials used in turnout gear are the safest materials available, and without them, firefighters would be at extreme risk for burns and exposure to known cancer-causing toxic chemicals present on the fireground, as well as metabolic heat stress.... Alternative materials tried by the U.S. fire service thus far have proven to be unsafe.”⁸⁰
- j. 2020 – Defendant Lion’s hired consultant Chrostowski also stated in Firefighter Nation that all turnouts are compliant with the standards set by the

NFPA and Swiss organization OEKO-TEX’s Standard 100 for PPE and Materials for PPE. “The OEKO-TEX certification process tests for the presence of unsafe levels of trace materials, including PFOA.”⁸¹

⁷⁸ *Fact Sheet on AFFF Fire Fighting Agents*, Fire Fighting Foam Coal. (2017), <https://tinyurl.com/yyxscyas>.

⁷⁹ *Best Practice Guidance for Use of Class B Firefighting Foams*, Fire Fighting Foam Coal. (May 2016), <https://tinyurl.com/2kzdsed9>.

⁸⁰ Paul Chrostowski, *Research and Independent Testing Shows Firefighters’ Turnout Gear Remains Safe Despite Claims* (June 3, 2020), <https://www.firefighternation.com/healthsafety/research-and-independent-testing-shows-firefighters-turnout-gear-remains-safe-despiteclaims/#gref>.

⁸¹ *Id.*

- k. 2021 - In a New York Times article, Defendant W.L. Gore maintained that its turnout products were safe.⁸²
- l. 2021 – Defendant Lion stated that the representations articulated by its consultant Paul Chrostowski in 2020 (see above), reflect its position: “Dr. Chrostowski’s report says it all for Lion.”⁸³
- m. 2021 – Defendant MSA/Globe and W. L. Gore have continued to state that their products have been tested and are safe.⁸⁴
- n. 2022 – Defendant 3M stated that it was not “necessary or appropriate” to declare any PFAS hazardous.⁸⁵ It also states on its website that: “The weight of scientific evidence from decades of research does not show that PFOS or PFOA causes harm in people at current or past levels....Decades of research into the health of these workers has not identified negative health outcomes caused by exposure to PFOA or PFOS....It is important to know that while some studies may find links or associations with possible health outcomes, this is not the same as causation. The weight of scientific evidence does not show that PFOS or PFOA causes harm to people at current or historical levels. Although PFAS have been detected in the environment at extremely low levels, their mere presence does not mean they are harmful.... Although it has been widely reported that no causal connection has been identified between exposure to PFOS or PFOA and harm to people’s health, there is a great deal of misinformation in the public domain.... The findings of the C-8 science panel are also frequently misunderstood.”⁸⁶
- o. 2022 - DuPont and Chemours also continue to assert that there is little scientific evidence to support that PFAS and/or certain PFAS, like fluoropolymers, are harmful to human health.⁸⁷

⁸² Hiroko Tabuchi, *Firefighters Battle an Unseen Hazard: Their Gear Could Be Toxic*, New York Times, (January 26, 2021), <https://www.nytimes.com/2021/01/26/climate/pfas-firefightersafety.html>.

⁸³ David Ferry, *The Toxic Job of Being A Hero*, Men’s Health, (September 21, 2021), <https://www.menshealth.com/health/a37624731/cancer-firefighter-gear-pfas/>.

⁸⁴ Andrew Wallender, *Firefighters Want Halt on Money From Makers of PFAS-Laden Gear*, Bloomberg Law, (January 19, 2021), <https://news.bloomberglaw.com/pfas-project/firefighterswant-halt-on-money-from-makers-of-pfas-laden-gear>.

⁸⁵ Jim Spencer, *3M's Support for PFAS Could Cost Taxpayers Billions of Dollars*, Star Tribune (September 11, 2021), <https://www.startribune.com/3m-s-support-for-pfas-could-cost-taxpayersbillions-of-dollars/600096094/>.

⁸⁶ *3M's Commitment to PFAS Stewardship*, 3M (last visited Sept. 30, 2022), https://www.3m.com/3M/en_US/pfas-stewardship-us/health-science/

⁸⁷ *What Government Agencies Say*, DuPont, <https://www.pp.dupont.com/pfas/what-governmental-agencies-say.html> (last visited January 12, 2022); *Our Commitment to PFAS*

- p. 2022 - DuPont maintains that turnouts keep firefighters safe and “protect against the intrusion of...chemicals.”⁸⁸

145. As frequent sponsors and advertisers in fire service publications, Defendants have been so influential in the industry that fire service leadership has echoed these narratives.

146. Also, in January 2021, Defendants DuPont and Chemours along with Corteva (the agricultural unit of DuPont that it spun off in 2019) announced a cost-sharing agreement worth \$4 billion to settle lawsuits involving the historic use of PFAS – thereby acknowledging, at long last, the significant harm their PFAS chemicals have caused to human health and the environment.

147. Plaintiff only learned for the first time in approximately July 2023 that his prolonged exposure to PFAS in the gear and foam he used throughout his career may be the causing factor of his health conditions.

F. New Research Indicates That Firefighters are at Significant Risk of Harm From Exposure to PFAS in Turnouts and Class B Foams — But Defendants Continue to Discount or Deny These Risks

148. While historical research (and follow-on litigation) has centered on environmental impacts and environmental exposures associated with PFAS and PFAS-containing products, recent studies have focused specifically on the serious health impacts to firefighters stemming from their occupational exposure to turnouts and Class B foams containing PFAS.

149. In October 2019, for example, an expert panel of the International Pollutants Elimination Network (IPEN), an international non-profit organization comprised of over 600 public interest non-governmental organizations dedicated to improving global chemical waste policies, published a scientific paper that, in the words of its authors, “presents unequivocal

Stewardship, Chemours, <https://www.chemours.com/en/corporate-responsibility/sustainability-safety/our-commitment-topfas-stewardship>. (last visited Sept. 30, 2022)

⁸⁸ *Technology inside your turnout gear*, DuPont, <https://www.pp.dupont.com/knowledge/dupont-technology-in-your-turnout-gear.html> (last visited Sept. 30, 2022).

evidence from recent studies that firefighters” using Class B foams (primarily AFFF) “have unexpectedly elevated blood levels” of PFAS, including, specifically, PFHxS and PFOS, with PFHxS (a short-chain, C6 PFAS) being “potentially of greater concern than PFOS given its much longer elimination half-life in humans.”⁸⁹ The paper explains that “[f]irefighters can be significantly exposed to PFHxS and other PFAS from firefighting foam via various occupational mechanisms including direct exposure during use as well as exposure from contaminated personal protective equipment (PPE), handling of contaminated equipment, managing PFAS foam wastes, occupation of contaminated fire stations and consumption of contaminated local water and produce. Cross-contamination and legacy PFAS residues from inadequately decontaminated appliances after transitioning to fluorine-free foam can remain a long-term problem.”⁹⁰ The panel concluded that “[o]ngoing exposure to PFHxS, PFOS and other PFAS amongst firefighters remains a major occupational health issue,” noting that “[b]io-accumulation and very slow bioelimination may be very significant influencing factors in PFHxS exposure” in firefighters.⁹¹ “Of greater concern,” the panel observed, “is that firefighter blood levels for PFOS and PFHxS are many times higher than the median values for the general...population.”⁹²

150. In June 2020, scientists at the University of Notre Dame published a groundbreaking study on PFAS in turnout gear, and the exposure risks posed to firefighters that wear, wore, or handle such gear (“Notre Dame Turnout Study”). The Notre Dame Turnout Study analyzed over 30 sets of used and unused (still in their original packaging) turnout gear made by

⁸⁹ *Perfluorohexane Sulfonate (PFHxS) – Socio-Economic Impact, Exposure and the Precautionary*

Principle Report, IPEN Expert Panel (October 2019),

https://ipen.org/sites/default/files/documents/pfhxs_socio-economic_impact_final_oct.2019.pdf.

⁹⁰ *Id.* at 25.

⁹¹ *Id.*

⁹² *Id.*

six U.S. manufacturers, including Defendants MSA/Globe, Lion and Honeywell, over several production years, as listed below.⁹³

PPE gear manufacturers sampled:	# samples
Globe Manufacturing (Pittsfield MA),	11
Lion Group (Dayton OH),	12
Honeywell First Responder (Dayton, OH),	2
Lakeland Fire (Decatur, AL)	2
Quest Fire Apparel (Saratoga Springs, NY)	1
Quaker Safety (Quakertown, PA)	2

The type and number of turnout gear samples used in this study.

151. The Notre Dame Turnout Study noted that these manufacturers' turnout gear (or personal protective equipment-PPE, as it is described in the study) are manufactured "from textiles that are made from fluoropolymers (one form of PFAS) or extensively treated by PFAS in the form of side-chain fluoropolymers."⁹⁴ According to the researchers, "[t]hese PFAS include fluoropolymer materials such as PTFE used as a moisture barrier in the inner layers of turnout gear."⁹⁵ The study found significant levels of PFAS chemicals – including PFOA, PFOS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnA, PFDoA, PFTrDA, PFTODA, PFBS, PFOSA, NEtFOSA, MeFOSAA, N-MeFOSE, N-EtFOSE and 6:20FTS – in both new and used turnout gear, and across layers, portions, and materials in the turnout gear, including in material layers that are not intentionally treated with PFAS by the manufacturer, thereby providing "the first evidence that suggests PFAS appear to migrate from the highly fluorinated layers and collect in the untreated layer of clothing worn against the skin."⁹⁶

⁹³ Peaslee, *supra* note 4.

⁹⁴ *Id.* at 594.

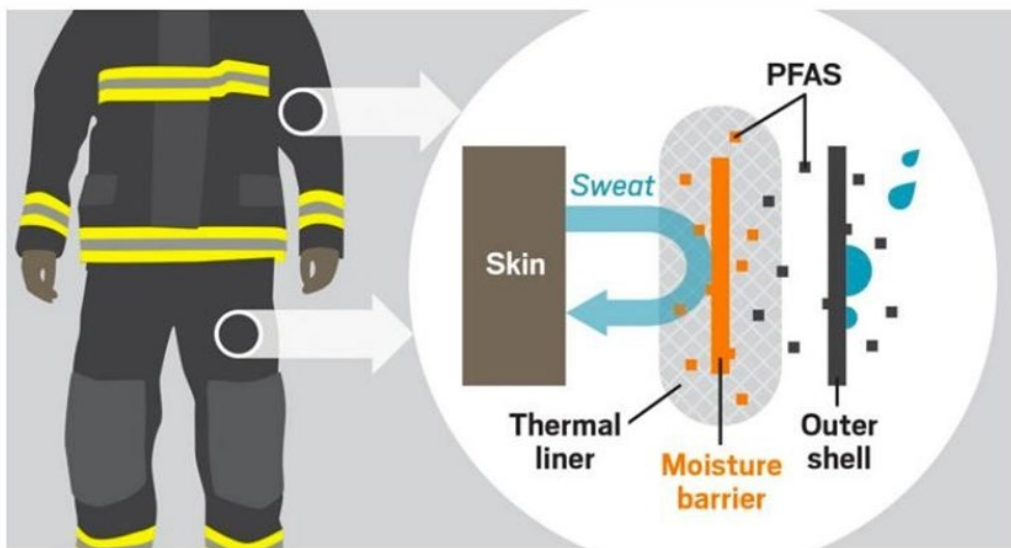
⁹⁵ *Id.*

⁹⁶ *Id.* at 596.

152. These findings suggest that, as the garments are worn, PFAS from the outer shell and the moisture barrier can migrate from the turnouts and contaminate both the firefighter, their apparatus and workplace with PFAS. The analysis also indicated that fluoropolymers from the outer layer decompose into other PFAS, including PFOA.

Table 2. Quantities of Target PFAS (in ppb) Found in US Turnout Gear by LC-MS/MS Analysis

values in ppb	jacket 2008 unused			pants 2014 used			jacket 2008 used	jacket 2017 unused
	thermal liner	moisture barrier	outer shell	thermal liner	moisture barrier	outer shell	moisture barrier	moisture barrier
PFBA	<MDL	12.8	10.6	139	615	21.5	20.5	991
PFPeA	<MDL	12.6	17.8	228	104	164	18.1	2.49
PFIhxA	<MDL	30.5	36.9	199	28.6	10.9	35.8	36.9
PFIHpA	<MDL	12.4	25.4	105	5.82	2.23	14.3	25.4
PFOA	78	46	182	850	71	97	37	<MDL
PFNA	2.63	<MDL	8.2	25.3	1.95	<MDL	2.76	<MDL
PFDA	2.98	6.51	5.51	133	<MDL	<MDL	23.7	<MDL
PFUnA	<MDL	<MDL	<MDL	7.96	<MDL	<MDL	2.51	<MDL
PFDoA	<MDL	5.01	<MDL	68.6	<MDL	<MDL	25.9	<MDL
PFBS	283	140	142	53 400	47 900	1050	230	90 400
PFOS	<MDL	<MDL	<MDL	7	<MDL	<MDL	2	<MDL
6:2 FTS	<MDL	<MDL	<MDL	25.9	12.9	<MDL	<MDL	<MDL
8:2 FTS	<MDL	<MDL	<MDL	11.1	<MDL	<MDL	<MDL	<MDL



Credit: Environ. Sci. Technol. Lett.

Over time, PFAS in a firefighter's turnout gear can migrate from a moisture barrier (orange) into a thermal liner that contacts skin. PFAS can also be shed from an outer shell (black) into the environment.

153. “Startlingly,” researchers reported, “garment to hand transfer of total fluorine in the ppm range was also observed when researchers simply manipulated the textiles in [the]

laboratory.”⁹⁷ The accumulation of PFAS on researchers’ hands strongly suggests that transference of ppm levels of PFAS can occur merely by handling the turnouts and that PFAS exposure pathways include inhalation, ingestion and/or absorption (through dermal contact) – all of which DuPont internally acknowledged as being toxic in 1980. Such exposure pathways are a concern not only for firefighters that rely on turnouts to protect them from heat, fire, water and chemical hazards in the field, but to family members who may be exposed to the PFAS in turnouts as the result of home washing or storage. Lead researcher Dr. Graham Peaslee commented that turnouts are “the most highly fluorinated textiles I’ve ever seen”⁹⁸ and that the level of PFAS in turnout gear means that firefighters are “swimming in a sea of [PFAS]. Those numbers for scientists are scarily high...”⁹⁹

154. Despite these findings, Defendants have been quick to mischaracterize, dismiss or downplay the significance of the Notre Dame Turnout Study.”¹⁰⁰

155. Defendant MSA/Globe, when contacted about the study and asked whether Globe planned to study this issue and find an alternative to PFAS for turnouts, merely responded thusly: “[P]rotecting (firefighters) is Globe’s business; every piece of our turnout gear meets or exceeds applicable industry standards.”¹⁰¹

⁹⁷ *Id.*

⁹⁸ Raleigh McElvery, *Protective Gear Could Expose Firefighters to PFAS*, Chemical and Engineering News (July 1, 2020), <https://cen.acs.org/environment/persistentpollutants/Protective-gear-expose-firefightersPFAS/98/i26?fbclid=IwAR3ktyIcasjnxHiv3RNDRJldZmunQleAEoS3Av225uOscj2hFbffVcO3-Go>.

⁹⁹ Andrew Wallender, *Firefighters Face New Possible Risk From Toxic PFAS: Their Gear*, Bloomberg Law (June 23, 2020), <https://news.bloomberglaw.com/pfas-project/firefighters-facenew-possible-risk-from-toxic-pfas-their-gear>.

¹⁰⁰ Blair Miller, *Local Firefighters Concerned About Potentially Dangerous Chemicals on Gear*, Boston 25 News (February 26, 2019), <https://www.boston25news.com/news/local-firefightersfacing-concerns-over-potentially-dangerous-chemicals-on-gear/925236612/>.

¹⁰¹ *Id.*

156. Defendant Lion has also dismissed or minimized the significance of the Notre Dame Turnout Study's findings. Lion issued a Customer Safety Alert for PFOA and Turnout Gear stating: "Your Lion turnout gear continues to be safe and ready for action especially when properly maintained. It is extremely important that firefighters continue to wear and properly care for their gear to stay safe on the job."¹⁰²

157. The Customer Safety Alert goes on to stress that Lion does not use PFOA or PFOS (two long-chain PFAS chemicals) in its turnouts.¹⁰³ It does not, however, address that Lion's turnouts in fact contain other PFAS chemicals, nor warn firefighters or the public about health harms associated with exposure to these toxic, bio-accumulating chemicals.

**HERE'S ALL YOU NEED TO KNOW
ABOUT PFOA AND YOUR TURNOUT GEAR.**

What is PFOA and why are we talking about it?

Perfluorooctanoic Acid (PFOA) is a chemical that until recently was used in the process to make many different industrial chemicals and products. The manufacture and use of PFOA was mostly phased out by major chemical companies by 2010. By 2015, its manufacture was eliminated in the United States.

In the firefighting protective clothing industry, PFOA was used as a processing agent in the manufacture of resins used to make PTFE films – the primary component of the moisture barrier used in turnout gear. While most residual PFOA was eliminated from the manufacturing process of PTFE, some tiny trace amounts remained.

LION does not use PFOA or PFOS in our turnout gear or any of our protective products.

PFOS has never been a component of turnout gear. PFOS health and environmental concerns are largely related to AFFF foams and are not connected to turnout gear.

158. As noted above, Defendant Lion's paid consultant, Dr. Paul Chrostowski, also has taken aim at the Notre Dame Turnout Study and its findings. Refuting a Fire Rescue magazine article about the study, Chrostowski repeated Lion's website statement that "PFOA was never part of the gear itself and frequent independent testing has found only trace amounts of it in any

¹⁰² Lion Customer Safety Alert – PFOA and Turnout Gear (April 24, 2019), https://cdn2.hubspot.net/hubfs/3475623/LION_PFOA_factsheet_042419.pdf.

¹⁰³ *Id.*

of the gear – not nearly enough to cause concern, and in amounts similar to consumer products.”¹⁰⁴ Chrostowski went on to say “[t]he fact is that one may find trace amounts of ‘short-chain’ PFAS such as PFBS and PFHxA in firefighting textiles, but the scientific research shows that these materials are far less toxic than even PFOA and at the tiny trace levels the risk are extremely low based on numerous credible published scientific research papers.”¹⁰⁵ Finally, as mentioned above, Chrostowski falsely stated that the link between PFAS exposure and cancer is “extremely weak.”¹⁰⁶

159. And yet, Lion has admitted publicly that dermal absorption is a pathway of exposure to cancer-causing chemicals for firefighters. In Lion’s Not in Our House cancer awareness fact sheet that currently appears on the company’s website, Lion warns firefighters: “For every 5 degree increase in temperature, skin becomes 400% more absorbent. The hotter you are, the more carcinogens your skin absorbs.”¹⁰⁷ This statistic is alarming given that the core body temperature of firefighters routinely increases during firefighting activities while wearing turnouts which contain known carcinogens.¹⁰⁸

¹⁰⁴ Paul Chrostowski, *Research and Independent Testing Shows Firefighters’ Turnout Gear Remains Safe Despite Claims*, Firefighter Nation (June 3, 2020), <https://www.firefighternation.com/health-safety/research-and-independent-testing-shows-firefighters-turnout-gear-remains-safe-despite-claims/#:~:text=The%20materials%20used%20in%20turnout%20gear%20are%20the,service%20thus%20far%20have%20proven%20to%20be%20unsafe.>

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Cancer Awareness Infographic*, Lion Group Inc., [https://f.hubspotusercontent20.net/hubfs/3475623/NOT%20IN%20OUR%20HOUSE%20Tip%20heet_Infographic%20\(05-19-21\).pdf](https://f.hubspotusercontent20.net/hubfs/3475623/NOT%20IN%20OUR%20HOUSE%20Tip%20heet_Infographic%20(05-19-21).pdf), (last visited Oct. 12, 2022).

¹⁰⁸ Nancy Espinoza, *Can We Stand the Heat?*, Journal of Emergency Medical Services, (April 30, 2008), <https://www.jems.com/operations/can-we-stand-heat-study-reveal/>; Gavin P. Horn, et al., *Thermal Response to Firefighting Activities in Residential Structure Fires: Impact of Job Assignment and Suppression Tactic*, Ergonomics (July 31, 2017), <https://tinyurl.com/4j2mz7f7>.



160. On September 26, 2022, the International Agency for Research for Cancer (“IARC”), the specialized agency of the World Health Organization, announced that it would be having a Meeting on PFOA and PFOS from November 7–November 14, 2023.

161. In effect, the IARC nominated PFOA and PFOS for review and publishing in the IARC Monographs. The expectation of the meeting is to reach an industry-wide consensus on the strength of evidence available to classify those agents as carcinogenic.

162. Likewise, Defendant Honeywell has stated: “The skin on the neck is very thin and prone to absorbing carcinogenic particulates.”¹⁰⁹

163. Another recent Harvard study examining PFAS levels in fire stations dust found that “dust in turnout gear locker areas and adjoining apparatus bays had significantly higher

¹⁰⁹ Ronnie Wendt, *Innovations in Turnout Gear*, *Industrial Fire World* (March 17, 2021), <https://www.industrialfireworld.com/598931/innovations-in-turnout-gear>.

fluorine concentrations compared to living rooms in fire stations,” as well as fluorine concentrations typically found in in Class B foam and/or textiles as opposed to consumer products.¹¹⁰

164. For years, the International Association of Firefighters (“IAFF”) has held a yearly cancer summit and until 2021, had done little to address the PFAS in turnouts. Defendants, including at least DuPont, MSA/Globe, Gore, and Lion, have been regular sponsors of the IAFF Cancer Summit.

165. Plaintiff deserves more. He was among the first to respond to emergencies faced by his community, and never hesitated to help. Whether delivering a baby, responding to a fire, medical emergency, accident, mass shooting, terrorist attack, natural disaster, or teaching kids about fire safety, firefighters always put the community first. When a child is drowning in a pool or a family is caught in a burning house, they do not stop to calculate whether they will benefit by doing the right thing. They are true public servants. They step in and do what is needed when it is needed the most. Their health, safety and well-being must be of the highest priority.

G. It Was Technologically and Economically Feasible for Defendants to Design Safer Firefighting Foams and Turnouts

166. Defendants have long known that safer, reasonable, alternative designs existed and could be utilized. These designs are and were not only technologically feasible, but also economically. Indeed, given the enormous cost of remediation of the environment and litigation, not to mention the cost of human lives, these safe, feasible alternatives would have cost significantly less.

¹¹⁰ Young, *supra* note 5.

167. In the early 2000s, 3M, in conjunction with Solberg Scandinavian AS developed Re-Healing Foam (“RF”), a high-performance, AFFF-comparable product that contained no fluorochemicals, and resulted in two patents and three commercial products of PFAS-free firefighting foam. RF met the standard of “ICAO [International Civil Aviation Organization] Level B and matched AFFF in performance including a US MIL-Spec product.”¹¹¹ In 2007, Solberg bought 3M’s patent rights to RF and continued to market and sell RF. In 2011, Defendant Amerex acquired Solberg and continued to manufacture, market and sell RF. In 2014, the EPA presented Solberg with the Presidential Green Chemistry Challenge Award for its fluorine-free foams; the award recognizes technologies that prevent pollution and match or improve the performance of existing products.¹¹² In 2018, Defendant Perimeter Solutions in 2018 acquired Solberg and continued to manufacture, market and sell RF.

168. Also, beginning in the early 2000s, BIOEX launched a highly effective, fluorine free Class B F3 foam which has been approved and used by international airports, fire departments, oil and gas companies, the marine industry and pharmaceutical, and chemical companies around the world.¹¹³

¹¹¹ *Fluorine Free Firefighting Foams (3F) – Viable Alternatives to Fluorinated Aqueous Film Forming Foams (AFFF)*, IPEN Expert Panel (September 2018), https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC-14_12September2018d.pdf; Schaefer, Ted. H. et al., *New Foam Technology, New Found Benefits*, Solberg, IAFPA Sydney 2005 Conference Proceedings (Oct. 5-7, 2005), <https://www.kappetijn.eu/wp-content/uploads/2019/05/new-foam-technology-new-found-results-conferentie-sydney-2005.pdf>.

¹¹² *Presidential Green Chemistry Challenge: 2014 Designing Greener Chemicals Award*, U.S. Env’t Prot. Agency (October 2014), <https://www.epa.gov/greenchemistry/presidential-green-chemistry-challenge-2014-designing-greener-chemicals-award>.

¹¹³ *Fluorine Free Firefighting Foam (FFF) – Firefighting Foam Concentrates*, BIOEX website (last visited December 13, 2021), <https://www.bio-ex.com/en/our-products/compositions/fluorinefree-foam/>; *Fluorine Free Firefighting Foams (3F) – Viable Alternatives to Fluorinated Aqueous Film Forming Foams (AFFF)*, IPEN Expert Panel, p. 48 (September 2018),

169. However, lobbyists and companies invested in maintaining profits on fluorinated Class B foam not only continued to represent that PFAS-containing foam was safe, but also intentionally maligned the fluorine free foams, falsely asserting that these foams were less effective and more expensive.¹¹⁴ As noted by IPEN:

Over the years since the serious introduction on the market of Class B fluorine-free F3 foams suitable for hydrocarbon and polar solvent fires: there have been many attempts by the fluorochemical side of the industry and their lobbyist trade associations to undermine and downplay the operational performance of Class B fluorine-free foams whilst minimizing the environmental issues associated with fluorinated products. This has included publishing in the technical trade literature spurious performance tests carried out by non-independent or certified bodies funded by competitors to F3 producing companies, as well as continually perpetrating unsupported myths. It is these myths in particular that must be controverted for what they are: marketing hype, misrepresentation of test conditions, frank untruths or only partial truths, criticism of a competitor's product, and an exhibition of vested interests.¹¹⁵

170. In 2011, the Fire Fighting Foam Coalition, which includes Defendants Tyco, DuPont, and Buckeye, misrepresented a U.S. Navy report comparing Solberg's fluorinefree RF with Defendant National Foam's 6-Em AFFF and Defendant Buckeye's FC-3MS AFFF, asserting Solberg's RF was less effective. In fact, though Solberg's RF *was not made per military specifications* as it did not include fluorine, the U.S. Navy Report found:

For iso-octane, the non-fluorinated foam had shorter extinguishment times than the two AFFFs and was the only foam to achieve an extinguishment time under 30 seconds.... The non-fluorinated foam had substantially better performance on iso-octane than on any of the other fuels.

Conclusions: For the AFFF foams which were intended to work via formation of an aqueous film, fire extinction times were lengthened considerably in cases where film formation was made difficult by the low surface tension of the fuel. *For the non-filming fluorine-free foam, however, no such performance*

https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC14_12September2018d.pdf.

¹¹⁴ *Id.* at 20.

¹¹⁵ *Id.* at 22.

*decrement was observed, and the fire extinction times on the lowest surface tension fuel were lower than for fuels with higher surface tensions, and within the 30 second time limit specified (on gasoline) by MIL-F24385F.*¹¹⁶ (emphasis added)

171. Further, the study found that AFFF foams had a 25% drain time (between 4-6 minutes), whereas the fluorine-free RF's drain time was 12 minutes. This slower drain time leads to greater burn back resistance and greater safety for firefighters.

172. The technology to develop safer, effective, and economical fluorine-free Class B foam is and has been available for, at least, over 20 years. In fact, many firefighting foam manufacturers and distributors companies manufacture, market and/or sell fluorine-free firefighting foams, including Defendants Tyco, Perimeter Solutions, Chemguard, Johnson Controls, and National Foam.

173. EUROFEU, an umbrella organization representing fire protection trade associations and companies including Defendant Tyco, even stated in 2019: "We believe that F3s [fluorine-free foams] are very suitable for a growing number of applications such as municipal firefighting, training, some testing and as foam agents in first responding fire trucks."¹¹⁷

174. LAST FIRE, a consortium of international oil companies developing best industry practice in storage tank Fire Hazard Management including Shell Oil, Chevron, BP, Exxon and Defendant Perimeter Solutions, concluded after conducting 200 tests that: "Fluorine free foams

¹¹⁶ Solberg Foam website, *Re-Healing Foam Fire Performance*, Technical Bulletin, #1009 (last visited December 13, 2021), <https://www.solbergfoam.com/getattachment/f8574423-9518-4888-a054-c170c0d9a234/RE-HEALING-Foam-Fire-Performance.aspx>.

¹¹⁷ The Use of PFAS and Fluorine-Free Alternatives in Fire-Fighting Foams, European Commission DG Environment and European Chemicals Agency (ECHA), Final Report, June 2020, p. 273, https://echa.europa.eu/documents/10162/28801697/pfas_flourinefree_alternatives_fire_fighting_en.pdf/d5b24e2a-d027-0168-cdd8-f723c675fa98

can provide equivalent performance to C6 foams [AFFF] and provide appropriate performance for hydrocarbon [fires].”¹¹⁸

175. Safe fluorine-free turnout gear was and is also technologically and economically feasible.

176. Defendant Fire-Dex, manufactures, markets and sells an entire line of PFAS-free turnouts, as well as non-fluorinated fabrics from Safety Components with a PFAS-free water-repellent.¹¹⁹ “Made with the same fabric as our traditional TECGEN71 outer shell, this Case material is designed to reduce heat stress while offering the same performance levels in TPP, breathability, and overall reduction of composite weight.”¹²⁰ Further, because of the increased breathability and thermal protection, the PFAS-free gear is the only outer shell that can currently be paired with the lightest and thinnest thermal liners and moisture barriers.¹²¹ This, according to Fire-Dex, significantly reduces heat stress and cardiac failure for firefighters while also reducing the risk of cancer and other diseases by eliminating PFAS exposure through turnout gear.

177. Defendants MSA/Globe, Honeywell, Tencate, and Gore have developed, manufactured, marketed and/or sold PFAS-free waterproofing technology, PFAS-free outer shells in turnout gear and/or durable PFAS-free fabrics.¹²²

¹¹⁸ *Id.* at pp. 314-315. Hydrocarbon fires are flammable gas or liquid fires that may involve gas, oil, kerosene, ethanol, propane, acetylene, hydrogen, and methane, to name a few.

¹¹⁹ Fire-Dex Launches Non-Fluorinated PPE Fabrics, Firehouse.com (February 17, 2021), <https://www.firehouse.com/safety-health/ppe/turnout-gear/press-release/21210722/firedexfiredex-launches-nonfluorinated-ppe-fabrics>.

¹²⁰ Alternative PPE, Fire-Dex website, (last visited December 14, 2021), <https://www.firedex.com/catalog/tecgen51-fatigues/#materials>.

¹²¹ TecGen71 Outer Shell, Fire-Dex website, (last visited December 14, 2021), <https://www.firedex.com/tecgen71/>.

¹²² FreeFAS Durable Water Repellent (DWR) Coating, MSA/Globe website (last visited December 14, 2021), <https://globe.msasafety.com/newoutershells>; *Id.* at fn. 106, Wendt, Innovations in Turnout Gear, Industrial Fire World (March 17, 2021), <https://www.industrialfireworld.com/598931/innovations-in-turnout-gear>; WL Gore to Release

178. Defendant Honeywell even admitted that these PFAS-free alternatives are safe, feasible and economical: “Any minor tradeoffs with PFAS-free fabrics are outweighed by worker safety. And the protection level is unchanged. PFAS-free gear offers the same thermal protection and moves the same way. The color fastness and wear remain the same.”¹²³

179. While the technology to develop fluorine-free turnout gear has been available for years, the NFPA turnout standards-setting technical committee (“NFPA”) continues to adhere to certain guidelines for turnout gear which require PFAS—knowingly putting firefighters at risk for exposure to PFAS. This committee includes industry consultants, textile and gear manufacturers and representatives Defendants Lion, Tyco, and Honeywell.¹²⁴

180. The economic and technological feasibility of fluorine-free foams and turnout gear is well-established, and based on technology that has been available for years. The alternative designs detailed above are far safer for firefighters and eliminate the serious health risks that result from PFAS exposure.

181. The only barrier to producing safer alternatives to PFAS-containing foams and turnout gear has been Defendants’ opposition. Their continued manufacturing, marketing, selling and/or distributing PFAS-containing foams and turnout gear has exposed firefighters to toxic PFAS chemicals. These defective designs are and/or have been a substantial factor in causing Plaintiff’s injuries.

PFAS-free Waterproof Material for Apparel, Chemical Watch (October 4, 2021), <https://chemicalwatch.com/346695/wl-gore-to-release-pfas-free-waterproof-material-for-apparel>.

¹²³ *Id.* at fn. 100.

¹²⁴ NFPA 1971/1851 Technical Committee Meeting Minutes (March 31, 2020), https://www.nfpa.org/assets/files/AboutTheCodes/1971/1971_F2022_FAE_SPF_PreFD_MeetingMinutes_3_20.pdf; NFPA 1971/1851 Technical Committee Meeting Minutes (January 11-12, 2012), [https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf_prerocmeetingminutes_01-12%20\(2\).pdf](https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf_prerocmeetingminutes_01-12%20(2).pdf).

182. Based on all of the foregoing, Plaintiff brings this action for damages and for other appropriate relief sufficient to compensate him for the significant harm Defendants' PFAS chemicals and PFAS-containing products have caused.

H. Market Share Liability, Alternative Liability, Concert of Action, Enterprise Liability

183. Defendants in this action are manufacturers that control a substantial share of the market for turnouts, Class B foams, and/or chemical feedstock containing PFAS in the United States and are jointly responsible for the toxic exposure events of the firefighters in Illinois and for causing the damages and injuries complained of in this Complaint. Market share liability attaches to all Defendants and the liability of each should be assigned according to its percentage of the market for turnouts and Class B foam containing PFAS at issue in this Complaint. PFAS are fungible; it is nearly impossible to identify the exact Defendant who manufactured any given batch of turnouts, Class B foam, or chemical feedstock containing PFAS found free in the air, soil or groundwater, and each of these Defendants participated in a state-wide and national market for turnouts, Class B foam, and/or chemical feedstock.

184. Concert of action liability attaches to all Defendants, each of which participated in a common plan to commit the torts alleged herein and each of which acted tortuously in pursuance of the common plan to knowingly manufacture and sell inherently dangerous turnouts, Class B foam, and/or chemical feedstock containing PFAS.

185. Enterprise liability attaches to all of the named Defendants for casting defective products into the stream of commerce.\

THE PLAINTIFF'S WATER SUPPLY

186. Established in 1917 as Chanute Field, Chanute Air Force Base (AFB) was an Air Force training facility located in the east-central Illinois Village of Rantoul. The Base began as a pilot training school during world War I, and after a brief closure, reopened as a technical training center. Fire protection training was relocated to Chanute in 1964 and continued until the base's closure in 1993.

187. Testing for PFOS and PFOA was performed on the base in 2014. The groundwater testing done on Chanute yielded detections of PFOS above the EPA's drinking water health advisory, some as high as 1,960,000 ppt and PFOA as high as 151,000 ppt.¹²⁵

188. Eglin Air Force Base in Okaloosa County, Florida showed evidence that PFAS-containing AFFF was repeatedly discharged and filled the hangars on base.¹²⁶ High concentrations of PFOS and PFOA were detected in monitoring wells in the area of Eglin Air Force Base.¹²⁷

189. Built in 1941, Lackland Air Force is located in Bexar County, Texas. Lackland AFB is part of Joint Base San Antonio, an amalgamation of Fort Sam Houston, Randolph Air Force Base and Lackland Air Force Base, which were merged on October 1, 2010. PFAS-containing AFFF foam was used on base, persisted in the environment, and contaminated the groundwater. Independent water testing has found PFAS levels at the Base above EPAs Health Advisory level.

190. Andrews Air Force Base, now known as Joint Base Andrews, is an active U.S. Department of Defense facility in Camp Springs, Maryland. The base has been in operation since 1942. In 2018, the United States Air Force conducted a site investigation to determine the presence

¹²⁵ Perfluorooctane Sulfonate and Perfluorooctanoic Acid at Base Realignment and Closure Locations (June 2021), accessed at <https://media.defense.gov/2021/Oct/13/2002873090/-1/-1/0/PFOS-AND-PFOA-AT-BRAC-LOCATIONS.PDF>

¹²⁶ da Silva, B.F., Aristizabal-Henao, J.J., Aufmuth, J., Awkerman, J. and Bowden, J.A., 2022. Survey of per-and polyfluoroalkyl substances (PFAS) in surface water collected in Pensacola, FL. *Heliyon*, 8(8).

¹²⁷ *Id.*

and impact of PFAS on the Base. The Air Force determined that PFAS was released on the Base and into the environment above EPA lifetime health advisory levels. Testing of the groundwater on Andrews Air Force base revealed total PFOS and PFOA of approximately 38,400 ppt.

191. Plaintiff was also stationed on Keesler Air Force Base, Naval Construction Battalion Center, Ramstein Air Force Base, and Beale Air Force Base. The United States Air Force started using AFFF foam in the early 1970's. Therefore, upon information and belief, Plaintiff ingested PFAS-contaminated water at or near the aforementioned military installations, as wells as the transported the PFAS-laden portable water to all sources of drinking water supplies on and off the Bases.

192. Contamination from PFOA and/or PFOS presents a threat to public health and the environment.¹²⁸

193. Releases of PFAS to land, air, and water from industrial sites are known pathways to the environment for PFOA and PFOS.

194. Due to their widespread use in consumer and commercial products, PFAS may also enter the environment from wastewater treatment facilities after the products containing them have been disposed of in landfills, during the use of the products, or in other manners.

195. Upon information and belief, the United States Air Force has stored and used Defendants' AFFF containing PFOA and/or PFOS chemicals in fire training and response exercises at its military installations and facilities.

¹²⁸ According to EPA, Exposure to PFOA and PFOS Over Certain Levels May Have Effects on Fetal Development, The Immune System, and the Thyroid Gland, as Well as Cause Liver Damage And Cancer. *See* GAO, *Man-Made Chemicals and Potential Health Risks: EPA Has Completed Some Regulatory-Related Actions for PFAS*, GAO-21-37 (Washington, D.C.: Jan. 27, 2021).

196. As a result of chemical exposures, Plaintiff's decline in health was caused by, or substantially contributed to by PFAS contamination and Plaintiff thereby suffered damages in an amount to be established at trial.

3M'S KNOWLEDGE AND FRAUDULENT COVER-UP OF THE DANGERS OF PFAS

197. In the 1950s, based on its own internal studies, 3M concluded that PFAS are "toxic."

198. 3M knew as early as the mid-1950s that PFAS bioaccumulate in humans and animals.¹²⁹

199. By the early 1960s, 3M understood that some PFAS are highly persistent in the environment, meaning that they do not degrade.

200. 3M knew as early as 1960 that chemical waste from its PFAS manufacturing facilities that was dumped into landfills or spilled on natural surfaces would leach into groundwater and otherwise enter the environment. A 3M internal memo from 1960 described the company's understanding that such wastes "[would] eventually reach the water table and pollute domestic wells."¹³⁰

201. As early as 1963, 3M was aware that its PFAS products were persistent in the environment and would not degrade after disposal.

202. 3M began monitoring the blood of its employees for PFAS, as early as 1976, because 3M was concerned about the health effects of PFAS. The studies revealed that some 3M

¹²⁹ See Exhibit 1009, Plaintiff's Second Amended Exhibit List, *State of Minnesota v. 3M Co.*, Case. No. 27-cv-10-28862, Index #1057 (Minn. D. Ct. Feb. 14, 2018), available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1009.pdf>

¹³⁰ See Exhibit 1025 at 2, Plaintiff's Second Amended Exhibit List, *State of Minnesota v. 3M Co.*, Case. No. 27-cv-10-28862, Index #1057 (Minn. D. Ct. Feb. 14, 2018), available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1025.pdf>

personnel were exposed to fluorochemicals between 100 and 300 times the normal levels in their blood.

203. 3M documents from 1977 relating to these worker tests further confirm that PFAS bioaccumulate.

204. By at least 1970, 3M knew that its PFAS products were hazardous to marine life.

205. One study of 3M's PFAS around this time had to be abandoned to avoid severe local pollution of nearby surface waters.

206. In 1975, 3M found there was a "universal presence" of at least one form of PFAS in blood serum samples taken from across the United States.¹³¹

207. Because PFAS are not naturally occurring in any amount, anywhere on the planet, this finding unquestionably alerted 3M to the near inevitability that its products were a pathway for widespread public exposure to its toxic ingredient—a likelihood that 3M considered internally but did not share outside the company.

208. This finding also alerted 3M to the likelihood that this PFAS is mobile, persistent, bio-accumulative, and biomagnifying, as those characteristics would explain the ubiquitous presence of this PFAS from 3M's products in human blood.

209. According to a deposition transcript in a lawsuit brought by the State of Minnesota against 3M [No. 27-cv-10-28862 (4th Judicial Dist. Ct. Hennepin Cty.)] ("Minn. Lawsuit") for damages to the state's natural resources from PFAS, 3M began monitoring the blood of its employees for PFAS as early as 1976, because the company was "concerned" about "health"

¹³¹ Technical Report Summary: re Absorption of FC 95 and FC 143 on Soil, Feb. 27, 1978, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf>.

effects of PFAS. 3M documents from 1977 relating to these worker tests further confirmed that PFAS bioaccumulate.

210. Other studies by 3M in 1978 showed that PFOA and PFOS are toxic to monkeys. Also in 1978, a group of scientists and doctors met to review the results of various studies as part of the Fluorochemicals in Blood program. At the meeting, Dr. Harold C. Hodge told 3M's then medical director, Dr. F.A. Ubel, that employees' physical examination results should be analyzed in the context of the general population. Specifically, Dr. Hodge stated that "[t]here appears to be indications of liver change from the physical examination results."¹³²

211. In the late 1970s, 3M studied the fate and transport characteristics of PFOS in the environment, including in surface water and biota.

212. A 1979 report drew a direct line between effluent from 3M's Decatur, Alabama plant and PFAS bioaccumulating in fish tissue taken from the Tennessee River. 3M resisted calls from its own ecotoxicologists going back to 1979 to perform an ecological risk assessment on PFOS and similar chemicals.

213. 3M's own ecotoxicologists continued raising concerns to 3M until at least 1999.

214. In 1983, 3M scientists opined that those concerns about PFAS give rise to legitimate questions about the persistence, accumulation potential, and ecotoxic of [PFAS] in the environment.¹³³

¹³² 3M Interoffice Correspondence re: Meeting Minutes – Meeting with H.C. Hodge, June 7, 1979, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2724.pdf>.

¹³³ Memorandum from R.G. Perkins to F.D. Griffith re: Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988, meeting with DuPont, January 5, 1988, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf>.

215. In 1984, 3M's internal analyses demonstrated that PFAS were likely bioaccumulating in 3M fluorochemical employees.¹³⁴

216. According to the Minnesota Attorney General, despite 3M's understanding of the risks associated with PFAS, 3M engaged in a campaign to distort scientific research concerning PFAS and to suppress research into the potential harms associated with PFAS.

217. According to a deposition transcript from the Minn. Lawsuit, 3M recognized that if the public and governmental regulators became aware of the risks associated with PFAS, 3M would be forced to halt its manufacturing of PFAS and PFAS-derived products which would result in the loss of hundreds of millions of dollars in annual revenue.¹³⁵

218. The potential loss of 3M's massive profits from PFAS drove 3M to engage in a campaign to influence the science relating to PFAS and, according to internal 3M documents to conduct scientific "research" that it could use to mount "[d]efensive [b]arriers to [l]itigation."

219. A key priority of an internal 3M committee—referred to as the FC CoreTeam—was to "[c]ommand the science" concerning "exposure, analytical, fate, effects, human health and ecological" risks posed by PFAS and for 3M to provide "[s]elective funding of outside research through 3M 'grant' money."

220. In exchange for providing grant money to friendly researchers, 3M obtained the right to review and edit draft scientific papers regarding PFAS and sought control over when and whether the results of scientific studies were published at all.

¹³⁴ Memorandum from D.E. Roach to P.F. Riehle re: Organic Fluorine Levels, Aug. 31, 1984, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf>.

¹³⁵ See Exhibits 2144 & 2204, Plaintiff's Second Amended Exhibit List, *State of Minnesota v. 3M Co.*, Case. No. 27-cv-10-28862, Index #1057 (Minn. D. Ct. Feb. 14, 2018), available at <https://www.ag.state.mn.us/Office/Cases/3M/StatesExhibits.asp>.

221. A significant aspect of 3M’s campaign to influence independent scientific research involved 3M’s relationship with Professor John Giesy. 3M provided millions of dollars in grants to Professor Giesy, who presented himself publicly as an independent expert but, as revealed in his deposition transcript in the Minn. Lawsuit, he privately characterized himself as part of the 3M “team.”

222. According to Professor Giesy’s deposition transcript in the Minn. Lawsuit, Professor Giesy worked on behalf of 3M to “buy favors” from scientists in the field for the purpose of entering a “quid pro quo” with the scientists.¹³⁶

223. According to emails produced by Professor Giesy in the Minn. Lawsuit, through his position as an editor of academic journals, Professor Giesy reviewed “about half of the papers published in the area” of PFAS ecotoxicology and billed 3M for his time reviewing the articles and, in performing reviews of these articles, Professor Giesy stated that he was always careful to ensure that there was “no paper trail to 3M” and that his goal was to “keep ‘bad’ papers [regarding PFAS] out of the literature” because “in litigation situations” those articles “can be a large obstacle to refute.”¹³⁷

224. 3M’s own employees recognized that 3M was concealing known dangers relating to PFAS. For example, in a 1999 resignation letter, an employee stated, “I can no longer participate in the process that 3M has established for the management of [PFAS.] For me, it is unethical to be concerned with markets, legal defensibility, and image over environmental safety.”¹³⁸

¹³⁶ See *Id.* at Exhibit 1740 <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1740.pdf>.

¹³⁷ *Id.*

¹³⁸ See *id.* at Exhibit 1001, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf>.

225. In response to pressure from the United States Environmental Protection Agency (“EPA”), 3M began to phase out production of PFOS and PFOA products in 2000.

226. On May 16, 2000, 3M issued a news release asserting that “our products are safe,” citing the company’s “principles of responsible environmental management” as the reason to cease production.¹³⁹

227. On the same day as 3M’s phase-out announcement, an EPA press release stated: “3M data supplied to EPA indicated that these chemicals are very persistent in the environment, have a strong tendency to accumulate in human and animal tissues and could potentially pose a risk to human health and the environment over the long term.”¹⁴⁰

228. In a memo explaining its decision, the EPA noted that PFOS was among certain chemicals that appear to be persistent, bio-accumulative and toxic.¹⁴¹

229. 3M knew or should have known that through their intended and/or common use, products containing PFAS would very likely injure and/or threaten public health and the environment at the locations Plaintiff was exposed.

OLD DUPONT’S KNOWLEDGE AND FRAUDULENT COVER-UP OF THE DANGERS OF PFAS AND MOUNTING LIABILITIES

230. Beginning in the 1950s, Old DuPont manufactured, produced, or utilized PFOA and other PFAS at several facilities in the United States.

¹³⁹ See *id.* at Exhibit 1690, available at <https://www.ag.state.mn.us/Office/Cases/3M/StatesExhibits.asp>

¹⁴⁰ EPA, EPA and 3M Announce Phase Out of PFOS, (May 16, 2000), https://www.epa.gov/archive/epapages/newsroom_archive/newsreleases/33aa946e6cb11f35852568e1005246b4.html.

¹⁴¹ *Id.* Also, the California State Water Resources Control Board has concluded that, major sources of PFAS” include industrial sites, landfills, and wastewater treatment plants. It elaborates: “PFAS can get into drinking water when products containing them are used or spilled onto the ground or into lakes and rivers. Once in groundwater, PFAS are easily transported large distances and can contaminate drinking wells.” See California Water Board, Per- and Polyfluoroalkyl Substances (PFAS) Background, <https://www.waterboards.ca.gov/pfas/background.html>.

231. Throughout this time, Old DuPont was aware that PFOA was toxic, harmful to animals and humans, bio-accumulative, and bio-persistent in the environment. Old DuPont also knew that it directly emitted and discharged, and continued to emit and discharge, PFOA in large quantities into the environment from its manufacturing plants, such that hundreds of thousands of people had been exposed to its PFOA, including through public and private drinking water supplies.

232. Old DuPont company scientists issued internal warnings about the toxins associated with their PFAS products as early as 1961.

233. Old DuPont's Toxicology Section Chief opined that such products should be "handled with extreme care," and that contact with the skin should be "strictly avoided."

234. In 1978, based on information it received from 3M about elevated and persistent organic fluorine levels in workers exposed to PFAS, Old DuPont initiated a plan to review and monitor the health conditions of potentially exposed workers to assess whether any negative health effects could be attributed to PFAS exposure.

235. This monitoring plan involved obtaining blood samples from the workers and analyzing them for the presence of organic fluorine.

236. By 1979, Old DuPont had data indicating that its workers exposed to PFOA had a significantly higher incidence of health issues than did unexposed workers.

237. Old DuPont did not report this data or the results of its worker health analysis to any government agency or community.

238. The following year, Old DuPont internally confirmed that PFOA "is toxic," that humans bioaccumulate PFOA in their tissue, and that "continued exposure is not tolerable."

239. Not only did Old DuPont know that PFOA bioaccumulates in humans, but it was also aware that PFOA could cross the placenta from an exposed mother to her gestational child.

240. In fact, Old DuPont had reported to EPA in March 1982 that results from a rat study showed PFOA crossing the placenta if present in maternal blood, but Old DuPont concealed the results of internal studies of its own plant workers confirming placental transfer of PFOA in humans.

241. While Old DuPont knew about this toxic danger as early as the 1960s, Old DuPont also was aware that PFAS could contaminate the surrounding environment and cause human exposure.

242. In 1981, Old Dupont tested for and found PFOA in the blood of female plant workers Parkersburg, West Virginia. DuPont observed and documented pregnancy outcomes in exposed workers, finding two of seven children born to female plant workers between 1979 and 1981 had birth defects—one an “unconfirmed” eye and tear duct defect, and one a nostril and eye defects.¹⁴²

243. In 1981, Old DuPont also knew that PFOA could be emitted into the air from its facilities, and that those air emissions could travel beyond the facility boundaries and enter the environment and natural resources.

244. By 1984, Old DuPont unquestionably was aware that PFOA is biopersistent. Old DuPont was long aware that the PFOA it was releasing from its facilities was leaching into groundwater used for public drinking water.

¹⁴² DuPont, C-8 Blood Sampling Results, 1981. (xnpw0228). DuPont. C-8 blood sampling results; 1981. (xnpw0228). <https://www.industrydocuments.ucsf.edu/docs/#id=xnpw0228>.

245. After obtaining data on these releases and the resulting contamination near Old DuPont's Washington Works plant in West Virginia in 1984, Old DuPont held a meeting at its corporate headquarters in Wilmington, Delaware, to discuss health and environmental issues related to PFOA (the "1984 Meeting").

246. Old DuPont employees who attended the 1984 Meeting discussed available technologies that could control and reduce PFOA releases from its manufacturing facilities, as well as potential replacement materials.

247. Old DuPont chose not to use either available technologies or replacement materials, despite knowing of PFOA's toxicity.

248. During the 1984 Meeting, Old DuPont employees in attendance spoke of the PFOA issue as "one of corporate image, and corporate liability."¹⁴³

249. They were resigned to Old DuPont's "incremental liability from this point on if we do nothing" because Old DuPont was "already liable for the past 32 years of operation."¹⁴⁴

250. They also stated that the "legal and medical [departments within Old DuPont] will likely take the position of total elimination" of PFOA use in Old DuPont's business, and that these departments had "no incentive to take any other position."¹⁴⁵

251. By 2000, Old DuPont's in-house counsel was particularly concerned about the threat of punitive damages resulting from Old DuPont's releases of PFOA at its Washington Works facility in West Virginia.

¹⁴³ Schmid, J.A., Personal & Confidential Memorandum, re: C-8 Meeting Summary (May 23, 1984), Wilmington, Del., available at https://static.ewg.org/files/duPont_elim_PFOA_1984.pdf (last accessed August 3, 2023) (hereinafter "The DuPont Memo").

¹⁴⁴ *See id.*

¹⁴⁵ *See id.*

252. Old DuPont's own Epidemiology Review Board repeatedly raised concerns about Old DuPont's statements to the public that there were no adverse health effects associated with human exposure to PFOA.

253. For example, in February 2006, the Epidemiology Review Board "strongly advise[d] against any public statements asserting that PFOA does not pose any risk to health" and questioned "the evidential basis of [Old DuPont's] public expression asserting, with what appears to be great confidence, that PFOA does not pose a risk to health."¹⁴⁶

254. In 2004, EPA filed an action against Old DuPont based on its failure to disclose toxic and exposure information for PFOA, in violation of federal environmental laws.

255. In 2005, Old DuPont eventually settled the action by agreeing to pay \$10.25 million in a civil administrative penalty and to complete \$6.25 million in supplemental environmental projects.

256. The combined settlement resolved eight counts brought by the EPA alleging violations of the Toxic Substances Control Act and the Resource Conservation and Recovery Act concerning the toxicity of PFAS compounds.

257. Old DuPont also promised to phase out the production and use of PFOA by 2015.

258. EPA called the settlement the "largest civil administrative penalty EPA has ever obtained under any federal environmental statute."¹⁴⁷

¹⁴⁶ Tom L. Beauchamp, et al., Memorandum to Michael Kaplan re: Epidemiology Review Board and PFOA (February 24, 2006), available at https://static.ewg.org/files/ERB_February2006.pdf (last accessed August 3, 2023).

¹⁴⁷ Dave Ryan, *EPA Settles PFOA Case Against DuPont for Largest Environmental Administrative Penalty in Agency History*, EPA Newsroom (Dec. 14, 2005), https://www.epa.gov/archive/epapages/newsroom_archive/newsreleases/fdcb2f665cac66bb852570d7005d6665.html

259. Old DuPont and Chemours knew or should have known that in their intended and/or common use products containing PFAS would very likely injure and/or threaten public health and the environment in Illinois, and anywhere else said products were used.

260. Also, in 2005, a final court order was entered approving Old DuPont's 2004 settlement in the class action lawsuit styled *Leach, et al. v. E. I. du Pont de Nemours & Co.*, Civil Action No. 01-C-608 (Wood Cty. W. Va. Cir. Ct.) (the "Leach Action") filed on behalf of approximately 70,000 individuals with PFOA-contaminated drinking water supplies in Ohio and West Virginia for benefits valued at over \$300 million.

261. Under the terms of the final class action settlement, Old DuPont agreed to fund a panel of independent scientists (the "C8 Science Panel") to conduct whatever studies were necessary to confirm which diseases were linked to class member PFOA exposure, to remove PFOA from the contaminated water sources, and to pay up to \$235 million for medical monitoring of class members with respect to any diseases linked by the C8 Science Panel to their PFOA exposure. "C-8," a term used internally by DuPont employees, is an alternative name for PFOA.

262. After seven years of study and analyses, the C8 Science Panel confirmed that PFOA exposures among class members were linked to six serious human diseases, including two types of cancer.

263. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule ("UCMR3"), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.¹⁴⁸

¹⁴⁸ See Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems, 77 Fed. Reg. 26072 (May 2, 2012).

264. In the May 2015 “Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS’s),” scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, and limits on the manufacture and handling of any PFOA containing product, and to develop safe nonfluorinated alternatives to these products to avoid long-term harm to human health and the environment.¹⁴⁹

265. On May 25, 2016, the EPA released a lifetime health advisory (“HA”) and health effects support documents for PFOS and PFOA.¹⁵⁰ The EPA developed the HA’s to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HA’s identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HA’s were based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations exposed to PFOS.

¹⁴⁹ Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly and perfluoroalkyl substances (PFASs). *Environ Health Perspective* 123: A107–A111, available at <http://dx.doi.org/10.1289/ehp.1509934>.

¹⁵⁰ See Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate. According to EPA, “...studies indicate that exposure to PFOA and PFOS over certain levels may result in... developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).”; see also EPA, Fact Sheet PFOA & PFOS Drinking Water Health Advisories, EPA Document Number 800-F-16-003, available at https://www.epa.gov/sites/default/files/2016-06/documents/drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf (last visited, May 8, 2023).

266. In 2016, the National Toxicology Program of the United States Department of Health and Human Services (“NTP”) and the International Agency for Research on Cancer (“IARC”) both released extensive analyses of the expanding body of research regarding the adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are “presumed to be an immune hazard to humans” based on a “consistent pattern of findings” of adverse immune effects in human (epidemiology) studies and “high confidence” that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.¹⁵¹

267. Old DuPont required that Chemours both directly assume its historical PFAS liabilities and indemnify Old DuPont from those liabilities. Chemours explained in its November 2016 SEC filing: “[s]ignificant unfavorable outcomes in a number of cases in the [C8] MDL could have a material adverse effect on Chemours’ consolidated financial position, results of operations or liquidity.”¹⁵²

268. On February 13, 2017, Old DuPont and Chemours agreed to pay \$670.7 million to resolve the approximately 3,500 then-pending cases in the C8.

OLD DUPONT’S MULTI-STEP, FRAUDULENT SCHEME TO ISOLATE ITS VALUABLE TANGIBLE ASSETS FROM PFAS LIABILITIES AND HINDER CREDITORS

269. By 2013, Old DuPont knew that it faced substantial environmental and other liabilities arising from its use of PFOA at Washington Works alone, as well as liability related to

¹⁵¹ See U.S. Dep’t of Health and Human Services, Nat’l Toxicology Program, NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate (Sept. 2016), at 1, 17, 19, available at https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf Filed: New York County Clerk 03/13/2023 04:41 PM INDEX NO. 152370/2023 NYSCEF DOC. NO. 2 NYSC (last visited, Oct. 25, 2023).

¹⁵² See The Chemours Company, Form 10-K 2016 at 16, available at <https://d1lge852tjjqow.cloudfront.net/CIK-0001627223/fe1bcb1-b84c-46e4-9c3a-54bef7943338.pdf>

PFAS contamination at other sites and areas throughout the country, and its sale of products containing PFAS, and that its liability was likely billions of dollars.

270. These liabilities include clean-up costs, remediation obligations, tort damages, natural resource damages and, most importantly, likely massive and potentially crippling punitive damages arising from Old DuPont's intentional misconduct.

271. Considering this significant exposure, upon information and belief, by 2013 Old DuPont's management began to consider restructuring the company to, among other things, avoid responsibility for the widespread environmental harm and personal injuries that Old DuPont's PFAS and associated conduct caused, and to shield billions of dollars in assets from these substantial liabilities. Old DuPont referred to this initiative internally as "Project Beta."

272. Upon information and belief, Old DuPont contemplated various restructuring opportunities, including potential merger structures. In or about 2013, Old DuPont and The Chemical Company ("Old Dow") began discussions about a possible "merger of equals."

273. Upon information and belief, Old DuPont recognized that neither Old Dow, nor any other rational merger partner, would agree to a transaction that would result in exposing Old Dow, or any other merger partner, to the substantial PFAS liabilities that Old DuPont faced.

274. Accordingly, Old DuPont's management decided to pursue a corporate restructuring strategy specifically designed to isolate Old DuPont's massive legacy liabilities from its valuable tangible assets to shield those assets from creditors and entice Old Dow to pursue the proposed merger.

275. Old DuPont engaged in a three-part restructuring plan, further explained below.

276. The first step in Old DuPont's plan was to transfer its Performance Chemicals business (which included Teflon® and other products, the manufacture of which involved the use

of PFOA and other PFAS) into its wholly owned subsidiary, Chemours. And then, in July 2015, Old DuPont “spun off” Chemours as a separate publicly traded entity and saddled Chemours with Old DuPont’s massive legacy liabilities (the “Chemours Spinoff”).

277. Old DuPont knew that Chemours was undercapitalized and could not satisfy the massive liabilities that it caused Chemours to assume. Old DuPont also knew that the Chemours Spinoff alone would not isolate its own assets from its PFAS liabilities, and that Old DuPont still faced direct liability for its own conduct.

278. Accordingly, Old DuPont moved on to the next step of its plan, designed to further distance itself from the exposure it had created over its decades of illicit conduct regarding PFAS.

279. The second step involved Old DuPont and Old Dow entering an “Agreement and Plan of Merger” in December 2015, pursuant to which Old DuPont and Old Dow with subsidiaries of a newly formed holding company, DowDuPont, Inc. (“DowDuPont”), which was created for the sole purpose of effectuating the merger. Old DuPont and Old Dow became subsidiaries of DowDuPont.

280. Then, through a series of subsequent agreements, DowDuPont engaged in numerous business segment and product line “realignments” and “divestitures.”

281. The net effect of these transactions was to transfer, either directly or indirectly, a substantial portion of Old DuPont’s assets to DowDuPont.

282. The third step involved DowDuPont spinning off two, new, publicly traded companies: (i) Corteva, which currently holds Old DuPont as a subsidiary, and (ii) Dow, Inc. (“New Dow”) which currently holds Old Dow as a subsidiary. DowDuPont was then renamed New DuPont.

283. As a result of these transactions, between December 2014 (pre-Chemours Spinoff) and December 2019 (post-Dow merger), the value of Old DuPont's tangible assets decreased by \$20.85 billion.

284. New DuPont and New Dow now hold the vast majority of the tangible assets that Old DuPont formerly owned.

THE CHEMOURS SPINOFF

285. In February 2014, Old DuPont formed Chemours as a wholly-owned subsidiary. Chemours was originally incorporated on February 18, 2014, under the name "Performance Operations, LLC."

286. On or about April 15, 2014, the company was renamed "The Chemours Company, LLC," and on April 30, 2015, it was converted from a limited liability company to a corporation named "The Chemours Company."

287. Prior to July 1, 2015, Chemours was a wholly-owned subsidiary of Old DuPont. On July 1, 2015, Old DuPont completed the spinoff of its Performance Chemicals Business, consisting of Old DuPont's Titanium Technologies, Chemical Solutions, and fluorochemical products segments, and Chemours became a separate, publicly traded entity.

288. The Performance Chemicals Business included fluorochemical products and the business segment that had manufactured, used, and discharged PFOA into the environment.

289. Prior to the Chemours Spinoff, Chemours was a wholly owned subsidiary of Old DuPont, and its Board of Directors had three members, all of whom were Old DuPont employees.

290. On June 19, 2015, a fourth member of the Board was appointed, and upon information and belief, this fourth member had served as a member of Old DuPont's Board of Directors from 1998 to 2015.

291. On July 1, 2015, effective immediately prior to the Chemours Spinoff, the size of the Chemours Board of Directors was expanded to eight members. The three initial Old DuPont employees resigned from the Board, and to fill the vacancies created thereby, seven new members were appointed.

292. To effectuate the Chemours Spinoff, Old DuPont and Chemours entered into the June 26, 2015, Separation Agreement (the “Chemours Separation Agreement”).

293. Pursuant to the Chemours Separation Agreement, Old DuPont agreed to transfer to Chemours all businesses and assets related to the Performance Chemicals Business, including ~37 active chemical plants.

294. Old DuPont completed a significant internal reorganization prior to the Chemours Spinoff, such that all the assets that Old DuPont deemed to be part of the Performance Chemicals Business would be transferred to Chemours.

295. At the same time, Chemours accepted a broad assumption of liabilities for Old DuPont’s historical use, manufacture, and discharge of PFAS, although the specific details regarding the nature, probable maximum loss value, and anticipated timing of the liabilities that Chemours assumed are not publicly available.

296. Notwithstanding the billions of dollars in PFAS liabilities that Chemours would face, on July 1, 2015, Chemours transferred to Old DuPont approximately \$3.4 billion as a cash dividend, along with a “distribution in kind” of promissory notes with an aggregate principal amount of \$507 million.

297. Thus, in total, Chemours distributed \$3.9 billion to Old DuPont. Chemours funded these distributions by entering approximately \$3.995 billion of financing transactions, including senior secured term loans and senior unsecured notes, on May 12, 2015. Also, Chemours

distributed approximately \$3.0 billion in common stock to Old DuPont shareholders on July 1, 2015 (181 million shares at \$16.51 per share price).

298. Accordingly, most of the valuable assets that Chemours may have had at the time of the Chemours Spinoff were unavailable to creditors with current or future PFAS claims, and Old DuPont stripped Chemours's value for itself and its shareholders. In total, Chemours transferred almost \$7 billion in stock, cash, and notes to Old DuPont and its shareholders. Old DuPont, however, only transferred \$4.1 billion in net assets to Chemours. Chemours assumed billions of dollars of Old DuPont's PFAS and other liabilities.

299. In addition to the assumption of such liabilities, the Chemours Separation Agreement required Chemours to provide broad indemnification to Old DuPont in connection with these liabilities, which is uncapped and does not have a survival period.

300. The Chemours Separation Agreement requires Chemours to indemnify Old DuPont against, and assume for itself, all "Chemours Liabilities," which is defined broadly to include, among other things, "any and all Liabilities relating . . . primarily to, arising primarily out of or resulting primarily from, the operation or conduct of the Chemours Business, as conducted at any time prior to, at or after the Effective Date . . . including . . . any and all Chemours Assumed Environmental Liabilities . . . ," which includes Old DuPont's historic liabilities relating to and arising from its decades of emitting PFOA into the environment.

301. The Chemours Separation Agreement also requires Chemours to indemnify Old DuPont against, and assume for itself, the Chemours Liabilities regardless of (i) when or where such liabilities arose; (ii) whether the facts upon which they are based occurred prior to, on, or subsequent to the effective date of the spinoff; (iii) where or against whom such liabilities are asserted or determined; (iv) whether arising from or alleged to arise from negligence, gross

negligence, recklessness, violation of law, fraud or misrepresentation by any member of the Old DuPont group or the Chemours group; (v) the accuracy of the maximum probable loss values assigned to such liabilities; and (vi) which entity is named in any action associated with any liability.

302. The Chemours Separation Agreement also required Chemours to indemnify Old DuPont from, and assume all, environmental liabilities that arose prior to the spinoff if they were “primarily associated” with the Performance Chemicals Business.

303. Chemours also agreed to use its best efforts to be fully substituted for Old DuPont concerning any order, decree, judgment, agreement, or action for Old DuPont’s environmental liabilities.

304. Notably, Chemours sued Old DuPont in Delaware state court in 2019, alleging, among other things, that if (i) the full value of Old DuPont’s PFAS liabilities were properly estimated and (ii) the Court does not limit Chemours’ liability that the Chemours Separation Agreement imposes, then Chemours would have been insolvent at the time of the Chemours Spinoff.

305. There was no meaningful, arms-length negotiation of the Separation Agreement.

306. In its Delaware lawsuit, Chemours alleges that Old DuPont refused to allow any procedural protections for Chemours in the negotiations, and Old DuPont and its outside counsel prepared all the documents to effectuate the Chemours Spinoff. Indeed, during the period in which the terms of commercial agreements between Chemours and Old DuPont were negotiated, Chemours did not have an independent board of directors or management independent of Old DuPont.

307. Although Chemours had a separate board of directors, Old DuPont employees controlled the Chemours board. Indeed, when the Chemours Separation Agreement was signed, Chemours was a wholly owned subsidiary of Old DuPont, and the Chemours board consisted of three Old DuPont employees and one former, long-standing member of the Old DuPont board.

308. Chemours' independent board of directors, newly appointed on July 1, 2015, immediately prior to the Chemours Spinoff, did not participate in the negotiations of the terms of the separation.

309. It is apparent that Old DuPont's goal with respect to the Chemours Spinoff was to segregate a large portion of Old DuPont's legacy environmental liabilities, including liabilities related to its PFAS chemicals and products, and in so doing, shield Old DuPont's assets from any financial exposure associated therewith.

310. Not surprisingly, given Old DuPont's extraction of nearly \$4 billion from Chemours immediately prior to the Chemours Spinoff, Chemours was thinly capitalized and unable to satisfy the substantial liabilities that it assumed from Old DuPont. Indeed, Chemours disclosed in public SEC filings that its "significant indebtedness" arising from its separation from Old DuPont restricted its current and future operations.

311. At the end of December 2014, Chemours reported it had total assets of \$5.959 billion and total liabilities of \$2.286 billion. At the end of 2015, following the Chemours Spinoff, Chemours reported that it had total assets of \$6.298 billion and total liabilities of \$6.168 billion as of December 31, 2015, yielding a total net worth of \$130 million.

312. Removing Chemours' goodwill and other intangibles of \$176 million yields a tangible net worth of negative \$46 million (that is, Chemours' liabilities were greater than its tangible assets). According to unaudited pro forma financial statements, as of March 31, 2015 (but

giving effect to all of the transactions contemplated in the Chemours Spinoff), Chemours had total assets of \$6.4 billion and total liabilities of \$6.3 billion.

313. Chemours also reported that these liabilities included \$454 million in “other accrued liabilities,” which in turn included \$11 million for accrued litigation and \$68 million for environmental remediation. Chemours also had \$553 million in “other liabilities,” which included \$223 million for environmental remediation and \$58 million for accrued litigation.

314. Chemours significantly underestimated its liabilities, including the liabilities that it had assumed from Old DuPont with respect to PFAS, and which Old DuPont and Chemours knew or should have known would be tens of billions of dollars.

315. Had Chemours taken the full extent of Old DuPont’s legacy liabilities into account, as it should have done, it would have had negative equity (that is, total liabilities that are greater than total assets), not only on a tangible basis, but also on a total equity basis, and, Chemours would have been rendered insolvent at the time of the Chemours Spinoff.

STEP 2: THE OLD DOW/OLD DUPONT “MERGER”

316. After the Chemours Spinoff, Old DuPont took the untenable position that it was not responsible for the widespread PFAS contamination that it had caused over several decades. Old DuPont publicly claimed that the PFAS liabilities associated with the Performance Chemicals business that Old DuPont had transferred to Chemours rested solely with Chemours, not with Old DuPont.

317. However, Old DuPont could not contractually discharge all its historical liabilities through the Chemours Spinoff, and Old DuPont remained liable for the liabilities it had caused, and that Chemours had assumed.

318. Old DuPont knew that it could not escape liability and would still face exposure for PFAS liabilities, including potentially massive punitive damages. So Old DuPont moved to the

next phase of its scheme. On December 11, 2015, less than six months following the Chemours Spinoff, Old DuPont and Old Dow announced that their respective boards had approved an agreement “under which the companies [would] combine in an all-stock merger of equals” and that the combined company would be named DowDuPont, Inc. (“Dow-DuPont Merger”). The companies disclosed that they intended to subsequently separate the combined companies’ businesses into three publicly traded companies through further spinoffs, each of which would occur 18 to 24 months following the closing of the merger.

319. To effectuate the transaction, Old DuPont and Old Dow entered into an Agreement and Plan of Merger (the “Dow-DuPont Merger Agreement”) that provided for (i) the formation of a new holding company – Diamond-Orion HoldCo, Inc., later named DowDuPont, and then renamed DuPont de Nemours, Inc., (i.e., New DuPont) and (ii) the creation of two new merger subsidiaries into which Old Dow and Old DuPont each would merge.

320. Upon the closing of the DowDuPont Merger, Old Dow merged into one merger subsidiary, and Old DuPont merged into the other merger subsidiary. Thus, because of the merger, and in accordance with the DowDuPont Merger Agreement, Old Dow and Old DuPont each became wholly owned subsidiaries of DowDuPont.

321. Although Old DuPont and Old Dow referred to the transaction as a “merger of equals,” the two companies did not actually merge at all, because doing so would have infected Old Dow with all Old DuPont’s historical PFAS liabilities. Rather, Old DuPont and Old Dow became affiliated sister companies that were each owned by the newly formed DowDuPont (i.e., New DuPont).

STEP 3: THE SHUFFLING, REORGANIZATION, AND FRAUDULENT TRANSFER OF ASSETS AWAY FROM OLD DUPONT AND SEPARATION OF CORTEVA AND NEW DOW

322. Following the Dow-DuPont Merger, DowDuPont (i.e., New DuPont) underwent a significant internal re-organization and engaged in numerous business segment and product line “realignments” and “divestitures.” The net effect of these transactions has been the transfer, either directly or indirectly, of a substantial portion of Old DuPont’s assets out of the company.

323. While, again, the details of these transactions remain hidden from Plaintiff, Plaintiff, and other creditors, it is apparent that the transactions were intended to frustrate and hinder creditors with claims against Old DuPont, including with respect to its substantial PFAS liabilities. The significant internal reorganization instituted by DowDuPont (i.e., New DuPont) was in preparation for the conglomerate being split into three, separate, publicly traded companies.

324. Old DuPont’s assets, including its remaining business segments and product lines, were transferred either directly or indirectly to DowDuPont (i.e., New DuPont), which reshuffled the assets and combined them with the assets of Old Dow, and then reorganized the combined assets into three distinct divisions: (i) the “Agriculture Business”; (ii) the “Specialty Products Business”; and (iii) the “Material Sciences Business.”

325. While the precise composition of these divisions, including many details of the specific transactions, the transfer of business segments, and the divestiture of product lines during this time, are not publicly available, it is apparent that Old DuPont transferred a substantial portion of its valuable assets to DowDuPont (i.e., New DuPont), for far less than the assets were worth.

326. Once the assets of Old DuPont and Old Dow were combined and reorganized, DowDuPont (i.e., New DuPont) incorporated two new companies to hold two of the three newly formed business lines: (i) Corteva, which became the parent holding company of Old DuPont, which in turn holds the Agriculture Business; and (ii) New Dow, which became the parent holding company of Old Dow, and which holds the Materials Science Business. DowDuPont (i.e., New

DuPont) retained the specialty products business, and prepared to spin off Corteva and New Dow into separate, publicly traded companies.

327. The mechanics of the separations are governed by the April 1, 2019 Separation and Distribution Agreement among Corteva, New Dow, and DowDuPont (i.e., New DuPont) (the “DowDuPont Separation Agreement”). The Dow DuPont Separation Agreement generally allocates the assets primarily related to the respective business divisions to Corteva (Agriculture Business), New Dow (Materials Science Business) and New DuPont (Specialty Products Business), respectively. New DuPont also retained several “non-core” business segments and product lines that once belonged to Old DuPont.

328. Similarly, Corteva, New Dow, and New DuPont each retained the liabilities primarily related to the business divisions that they retained, *i.e.*, (i) Corteva retained and assumed the liabilities related to the Agriculture Business; (ii) New DuPont retained and assumed the liabilities related to the Specialty Products Business; and (iii) New Dow retained and assumed the liabilities related to the Materials Science Business.

329. Corteva and New DuPont also assumed direct financial liability of Old DuPont that was not related to the Agriculture, Material Science or Specialty Products Businesses, including, upon information and belief, the PFAS liabilities. These assumed PFAS liabilities are allocated on a pro-rata basis between Corteva and New DuPont pursuant to the DowDuPont Separation Agreement, such that, after both companies have satisfied certain conditions, future liabilities are allocated 71% to New DuPont and 29% to Corteva.

330. The separation of New Dow was completed on or about April 1, 2019, when DowDuPont (i.e., New DuPont) distributed all New Dow’s common stock to DowDuPont

stockholders as a pro rata dividend. New Dow now trades on the New York Stock Exchange (“NYSE”) under Old Dow’s stock ticker, “DOW.”

331. On or about May 2, 2019, DowDuPont (i.e., New DuPont) consolidated the Agricultural Business line into Old DuPont, and then, on or about May 31, 2019, it “contributed” Old DuPont to Corteva. The following day, on June 1, 2019, DowDuPont (i.e., New DuPont) spun off Corteva as an independent public company.

332. Corteva now holds 100% of the outstanding common stock of Old DuPont. Corteva now also trades on the NYSE under the stock ticker “CTVA.”

333. The separation of Corteva was completed on or about June 1, 2019, when DowDuPont distributed all Corteva’s common stock to DowDuPont (i.e., New DuPont) stockholders as a pro rata dividend.

334. The corporate structures of New Dow and Old Dow, and Corteva and Old DuPont, respectively, following the separations are depicted below with substantially fewer tangible assets than they had prior to the restructuring.

335. On or about June 1, 2019, Dow DuPont changed its registered name to Dupont de Nemours (meaning New Dupont).

336. The net outcome of these transactions was to strip Old Dupont of its substantial tangible assets and transfer them to the new Dupont and Corteva for far less than they were originally worth.

337. Old Dupont expected that the Dow-DuPont merger created ‘goodwill’ worth billions of dollars. When the Corteva separation was complete, a portion of this ‘goodwill’ was assigned to Old-DuPont Dow-DuPont to prop up its balance sheet. The Old DuPont was left with substantially fewer tangible assets than it had prior to the restructuring.

338. In addition, Old DuPont owes a debt to Corteva of approximately \$4 billion. Recent SEC filings demonstrate the substantial deterioration of Old DuPont's finances and the drastic change in its financial condition before and after the above transactions.

339. For example, for the fiscal year ended 2014, prior to the Chemours Spinoff, Old DuPont reported \$3.6 billion in net income and \$3.7 billion in cash provided by operating activities. For the fiscal year ended 2019, just months after the Corteva separation, however, Old DuPont reported a net loss of negative \$1 billion and only \$996 million in cash provided by operating activities. That is a decrease of 128% in net income and a decrease of 73% in annual operating cash flow.

340. Additionally, Old DuPont reported a significant decrease in Income from Continuing Operations Before Income Taxes ("EBT"). Old DuPont reported \$4.9 billion in EBT for the period ending December 31, 2014. For the period ending December 31, 2019, Old DuPont reported EBT of negative \$422 million.

341. The value of Old DuPont's tangible assets further underscores Old DuPont's precarious financial situation. For the fiscal year ended 2014, prior to the Chemours Spinoff, Old DuPont owned nearly \$41 billion in tangible assets. For the fiscal year ended 2019, Old DuPont owned just under \$21 billion in tangible assets.

342. That means in the five-year period over which the restructuring occurred, when Old DuPont knew that it faced billions of dollars in PFAS liabilities, Old DuPont transferred or divested approximately half of its tangible assets—totaling \$20 billion.

343. As of September 2019, just after the Corteva spinoff, Old DuPont reported \$43.251 billion in assets. But almost \$21.835 billion of these assets were comprised of assets, including "goodwill" from its successive restructuring activities.

344. At the same time, Old DuPont reported liabilities totaling \$22.060 billion. Thus, when the Corteva spinoff was complete, Old DuPont's tangible net worth (excluding its intangible assets) was negative \$644 million.

345. Old DuPont's financial condition has continued to deteriorate. By the end of fiscal year 2019, Old DuPont reported \$42.397 billion in total assets, half of which (or \$21.653 billion) are intangible assets. Old DuPont's reported liabilities for the same period totaled \$21.869 billion.

346. Old DuPont's tangible net worth between September 30, 2019, and December 31, 2019, declined even further, whereby Old DuPont ended fiscal year 2019 with a tangible net worth of negative \$1.125 billion.

347. New DuPont—to which 71% of PFAS liabilities are “allocated” under the DowDuPont Separation Agreement once certain conditions are satisfied—is in the process of divesting numerous business segments and product lines, including tangible assets that it received from Old DuPont, and for which Old DuPont has received less than reasonably equivalent value.

348. Old DuPont's parent holding company, Corteva—to which 29% of PFAS liabilities are “allocated” under the DowDuPont Separation Agreement once certain conditions are satisfied—holds as its primary tangible asset the intercompany debt owed to it by its wholly owned subsidiary, Old DuPont. However Old DuPont does not have sufficient tangible assets to satisfy this debt obligation.

FIRST CAUSE OF ACTION

STRICT LIABILITY - DESIGN DEFECT

349. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

350. Plaintiff incorporates by reference all prior paragraphs of this complaint, as though fully set forth herein.

351. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities they have acquired, have engaged in the business of manufacturing, designing, selling, distributing, supplying, testing, inspecting, labeling, promoting, and/or advertising of turnouts and/or Class B foam and through that conduct have knowingly placed PFAS-containing products into the stream of commerce with full knowledge that they were sold to fire departments, or to companies that sold turnouts and/or Class B foam to fire departments for use by firefighters such as Plaintiff, who are and/or were exposed to PFAS through ordinary and foreseeable uses for the purpose of firefighting activities and training.

352. Defendants intended that the PFAS chemicals and/or PFAS-containing turnouts and/or Class B foam that they are and/or were manufacturing, designing, selling, distributing, supplying, testing, inspecting, labeling, promoting, and/or advertising would be used by firefighters, including Plaintiff, without any substantial change in the condition of the products from when it was initially manufactured, sold, distributed, and marketed by Defendants.

353. Turnouts and/or Class B foam are and/or were defective and unreasonably dangerous because they contain toxic PFAS chemicals which, as detailed above, are highly mobile, persistent known carcinogens and immune system disruptors that pose a substantial likelihood of harm to firefighters even when used as directed by the manufacturer for its intended purpose of firefighting activities, including training, extinguishment, ventilation, search-and-rescue, salvage, containment, and overhaul.

354. PFAS and/or PFAS-containing turnouts and/or Class B foam designed, manufactured, marketed, tested, inspected, labeled, advertised, promoted, sold and/or distributed

by the Defendants are and/or were unreasonably dangerous and defective in design or formulation because, at the time in which the products left the hands of the manufacturer or distributors, the utility and benefit of these products did not outweigh the risks inherent in the design or formulation of the PFAS-containing turnouts and/or Class B foam.

355. Firefighters regularly wear their turnouts in the F course of their profession and use Class B foam regularly in training and firefighting activities. Defendants have known for decades that exposure to PFAS or PFAS-containing materials is toxic to humans and animals, and results in significant – often catastrophic – health effects, including cancer and birth defects. This risk is heightened for people with consistent exposure to these chemicals which have a long half-life and impact the body on a cellular level. The risk of such serious health effects is and/or was not outweighed by the utility and benefit of PFAS or PFAS-containing, particularly in light of the availability of PFAS-free turnout gear and firefighting foam.

356. The turnouts and/or Class B foam designed, manufactured, marketed, tested, inspected, labeled, advertised, promoted, sold, and/or distributed by the Defendants were dangerous and defective in design or formulation because, when the PFAS-containing products left the hands of the manufacturer or distributors, these products posed significant health risks and were unreasonably dangerous in normal use.

357. Further, knowing of the dangerous and hazardous properties of PFAS and/or PFAS-containing turnouts and/or Class B foam, Defendants could have manufactured, marketed, distributed, and/or sold alternative designs or formulations of fluorine-free chemicals, fluorine-free turnouts and/or Class B foam.

358. These alternative designs and/or formulations were already practical, similar in cost, technologically feasible and/or available.

359. Indeed, in the 1990s, DuPont had a viable replacement for PFOA that was less toxic, less-bio-accumulative, but chose not pursue it. In the 2000s, multiple companies developed safer, effective fluorine-free foams. PFAS-free turnout gear is also available and feasible, and would be more widely available if its development, manufacture and sale were not hindered by Defendants' actions and misrepresentations.

360. The use of these alternative designs would have reduced or prevented the substantial likelihood of harm to Plaintiff that was caused by the Defendants' design, manufacture, testing, inspecting, labeling, marketing, advertising, promotion, sale and/or distribution of PFAS and/or PFAS-containing turnouts and/or Class B foam.

361. Additionally, the turnouts and/or Class B foam that were designed, manufactured, marketed, tested, inspected, labeled, advertised, marketed, promoted, sold, and/or distributed by the Defendants contained PFAS or PFAS-containing materials that were so toxic and unreasonably dangerous to human health and the environment, with the toxic chemicals being highly mobile and persistent, that the act of designing, formulating, manufacturing, testing, labeling, marketing, distributing, and/or selling these products was unreasonably dangerous and the foreseeable risks of causing serious health consequences exceeded the benefits associated with the design or formulation of PFAS-containing turnouts and/or Class B foam.

362. Defendants' design of toxic PFAS chemicals and/or PFAS-containing turnout gear and/or Class B foam was unreasonably dangerous and substantial factor in causing Plaintiff's injuries.

363. As a result of Defendants' defective design, Defendants are strictly liable in damages to Plaintiff.

364. Further, on information and belief, the Fluorochemical Products as manufactured and/or sold by Defendants reached Plaintiff's drinking water supply without substantial change in its condition and was used by consumers, local manufacturers, local fire training facilities, local fire departments, and airports, among others, in a reasonably foreseeable and intended manner.

365. The specific risk of harm in the form of soil, groundwater, and drinking water contamination from Fluorochemical Products containing PFOA and/or PFOS that Defendants manufactured and/or sold was reasonably foreseeable or discoverable by Defendants.

366. Defendants acted with willful or conscious disregard for the rights, health, and safety of Plaintiff, as described herein, thereby entitling Plaintiff to an award of punitive damages.

SECOND CAUSE OF ACTION

STRICT LIABILITY – FAILURE TO WARN

367. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

368. Plaintiff incorporates by reference all prior paragraphs of this complaint, as though fully set forth herein.

369. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing, labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-containing materials and, through that conduct, have knowingly placed PFAS containing products into the stream of commerce with full knowledge that they were sold to fire departments and/or to companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as Plaintiff.

370. Defendants' turnouts and/or Class B foam containing PFAS or PFAS-containing materials were unreasonably dangerous for their reasonably anticipated use because exposure to PFAS poses a significant threat to human health.

371. Defendants knew or should have reasonably known that the manner in which they were designing, manufacturing, testing, inspecting, labeling, marketing, distributing, and/or selling turnouts and/or Class B foam containing PFAS was hazardous to human health, and that firefighters, like Plaintiff, would be exposed to PFAS through ordinary and foreseeable uses of turnouts and/or Class B foam in the course of engaging in firefighting activities and training.

372. Defendants had a duty to warn against such latent dangers resulting from foreseeable uses of its product of which it knew or should have known.

373. At the time of manufacture, distribution, promotion, labeling, distribution, and/or sale, Defendants could have provided warnings or instructions regarding the full and complete risks of turnouts and/or Class B foam containing PFAS or PFAS-containing materials.

374. Defendants, however, breached their duty and failed to provide adequate warnings as to the potential harm that might result from exposure to PFAS or PFAS-containing products that would lead an ordinary reasonable user, such as Plaintiff, to contemplate the danger to human health posed by such products.

375. In fact, Defendants failed to issue any warnings, instructions, recalls and/or advice as to the danger of exposure to the toxic PFAS-containing turnouts and/or Class B foam, and the potential for such exposure to cause serious physical injury and disease.

376. Defendants also did not instruct Plaintiff on the proper steps they could take to reduce the harmful effects of previous exposure, the need to have periodic medical examinations,

including the giving of histories which revealed the details of the previous exposure, and the need to have immediate and vigorous medical treatment for all related adverse health effects.

377. Plaintiff did not and could not have known that the use of turnouts and/or Class B foam in the ordinary course of performing their duties as firefighters could be hazardous to their health, bioaccumulate in the blood, and cause serious health effects, including cancer. Had Defendants adequately warned Plaintiff, he would have heeded such warnings.

378. The burden on Defendants to guard against this foreseeable harm to Plaintiff was minimal, and merely required that they provide adequate instructions, proper labeling, and sufficient warnings about their PFAS-containing products.

379. Defendants were in the best position to provide adequate instructions, proper labeling, and sufficient warnings about the PFAS-containing, turnouts and/or Class B foam and to take steps to eliminate, correct, or remedy any exposure or contamination they caused.

380. Further, it was foreseeable that PFOA and/or PFOS from the Fluorochemical Products that Defendants manufactured and sold would enter the environment, resulting in the contamination of drinking water supplies that rely upon surface water as a source, including Plaintiff's drinking water supply.

381. The ordinary consumer—whether residential, industrial, municipal, or otherwise—would not have known or appreciated the risk of contamination from ordinary use and disposal of Defendants' Fluorochemical Products without an appropriate warning.

382. As a direct and proximate result of Defendants' failure to provide adequate and sufficient warnings, Plaintiff suffered the injuries and damages described herein for which Defendants are strictly liable.

383. Defendants acted with willful or conscious disregard for the rights, health, and safety of Plaintiff, as described herein, thereby entitling Plaintiff to an award of punitive damages.

THIRD CAUSE OF ACTION

STRICT LIABILITY – ABNORMALLY DANGEROUS ACTIVITY

384. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

385. Plaintiff repeats and restates the allegations set out in preceding paragraphs as if fully set forth herein.

386. At all relevant times, Defendants designed, manufactured, marketed, distributed, sold disposed of, discharged, and emitted hazardous substances from their facilities which they owned, controlled, and operated.

387. As a result of Defendants' discharging such substances from their sites, the groundwater under Plaintiff's property was contaminated with hazardous substances, creating actual harm to Plaintiff.

388. The manufacturing, utilization, disposal, and discharge of PFAS and other toxins constitute abnormally dangerous activities that introduce an unusual danger in the community.

389. Defendants' activities in selling, manufacturing, utilizing, disposing, and discharging of these products presented a high degree of risk of harm to humans and environment.

390. It was likely that the harm resulting from Defendants' activities would be great. The exercise of reasonable care does not eliminate the risk of harm posed by Defendants' activities.

391. Defendants' activities are not a matter of common usage in the areas in which they were carried out.

392. Defendants' activities were inappropriate to the locations in which they were carried out.

393. The dangerous attributes of and risk posed by Defendants' activities outweighed their value to the community.

394. The manufacturing, utilization, disposal, and discharge of these products are not matters of common usage in the areas where these activities were carried out.

395. At all relevant times, the risk of the Defendants' abnormally dangerous activities outweighed the value to the community.

396. Defendants' acts and omissions in designing, marketing, selling, manufacturing, utilizing, disposing, and discharging hazardous chemicals proximately caused the contamination to Plaintiff's properties and injuries and damages to Plaintiff, making them strictly liable for the harm caused by such contamination.

397. Defendants all foreseeably contributed to the contamination of the environment and Plaintiff's drinking water with PFAS and other toxins, and all subsequently contributed to Plaintiff's exposure to these chemicals, thereby causing injury and damages to Plaintiff, as set forth.

398. As a direct and proximate result of Defendants' discharges of hazardous substances and contaminants, Plaintiff has and will continue to suffer damages.

FOURTH CAUSE OF ACTION
NEGLIGENCE - DESIGN DEFECT

399. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

400. Plaintiff incorporates by reference all prior paragraphs of this complaint, as fully set forth herein.

401. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities they have acquired, have engaged in the business of manufacturing, designing, selling,

distributing, supplying, testing, labeling, promoting, and/or advertising of turnouts and/or Class B foam and through that conduct have knowingly placed PFAS-containing products into the stream of commerce with full knowledge that they were sold to fire departments, or to companies that sold turnouts and/or Class B foam to fire departments for use by firefighters such as Plaintiff.

402. Defendants intended that the PFAS chemicals and/or PFAS-containing turnouts and/or Class B foam that they are and/or were manufacturing, designing, selling, distributing, supplying, testing, labeling, promoting, and/or advertising would be used by firefighters, including Plaintiff, without any substantial change in the condition of the products from when they were initially manufactured, sold, distributed, and/or marketed by Defendants.

403. Defendants also knew or should have known that Plaintiff would be exposed to PFAS through ordinary and foreseeable uses of these products for the purpose of firefighting activities and training.

404. Defendants had a duty to not endanger the health and safety of Plaintiff who were foreseeable users of the PFAS-containing turnouts and/or Class B foam that Defendants are and/or were manufacturing, designing, selling, distributing, supplying, testing, labeling, promoting, and/or advertising as firefighter protective safety equipment.

405. The specific risk of harm in the form of soil, groundwater, and drinking water contamination from Fluorochemical Products containing PFOA and/or PFOS that Defendants manufactured and/or sold was reasonably foreseeable or discoverable by Defendants.

406. Defendants' duty required that they exercise reasonable care in the manufacturing, designing, selling, distributing, supplying, testing, labeling, promoting, and/or advertising of turnouts and/or Class B foam.

407. Defendants breached their duty of reasonable care by negligently manufacturing, designing, selling, distributing, supplying, testing, inspecting, labeling, promoting, and/or advertising of PFAS-containing turnouts and/or Class B foam which were defective and unreasonably dangerous. The turnouts and/or Class B foam contained toxic PFAS chemicals which, as detailed above, are highly mobile, persistent known carcinogens, and immune system disruptors that pose a substantial likelihood of harm to firefighters even when used as directed by the manufacturer for its intended purpose of firefighting activities.

408. PFAS and/or PFAS-containing turnouts and/or Class B foam designed, manufactured, marketed, tested, advertised, promoted, sold and distributed by the Defendants are and/or were unreasonably dangerous and defective in design or formulation because, at the time in which the products left the hands of the manufacturer or distributors, the utility and benefit of these products did not outweigh the risks inherent in the design or formulation of the PFAS-containing turnouts and/or Class B foam.

409. Firefighters wear their turnouts on every shift and use Class B foam regularly in training and firefighting activities. Defendants have known for decades that exposure to PFAS or PFAS-containing materials is toxic to humans and animals, and results in significant – often catastrophic – health effects, including cancer and birth defects. This risk is heightened for people, like Plaintiff, with consistent exposure to these chemicals which have a long half-life and impact the body on a cellular level. The risk of such serious health effects is and/or was not outweighed by the utility and benefit of PFAS or PFAS-containing, particularly in light of the availability of PFAS-free turnout gear and firefighting foam.

410. The turnouts and/or Class B foam designed, manufactured, marketed, tested, inspected, labeled, advertised, promoted, sold, and/or distributed by the Defendants were

dangerous and defective in design or formulation because, when the PFAS-containing products left the hands of the manufacturer or distributors, these products posed significant health risks and were unreasonably dangerous in normal use.

411. Further, knowing of the dangerous and hazardous properties of PFAS and/or PFAS-containing turnouts and/or Class B foam, Defendants could have manufactured, marketed, distributed, and/or sold alternative designs or formulations of fluorine-free chemicals, fluorine-free turnouts and/or Class B foam.

412. These alternative designs and/or formulations were already practical, similar in cost, technologically feasible and/or available.

413. Indeed, in the 1990s, DuPont had a viable replacement for PFOA that was less toxic, less-bio-accumulative, but chose not pursue it. In the 2000s, multiple companies developed safer, effective fluorine-free foams. PFAS-free turnout gear is also available and feasible, and would be more widely available if its development, manufacture, and sale were not hindered by Defendants' actions and misrepresentations.

414. The use of these alternative designs would have reduced or prevented the substantial likelihood of harm to Plaintiff that was caused by the Defendants' design, manufacture, marketing, advertising, promotion, sale and/or distribution of PFAS and/or PFAS-containing turnouts and/or Class B foam.

415. Additionally, the turnouts and/or Class B foam that were designed, manufactured, marketed, tested, inspected, labeled, advertised, marketed, promoted, sold, and/or distributed by the Defendants contained PFAS or PFAS-containing materials that were so toxic and unreasonably dangerous to human health and the environment, with the toxic chemicals being highly mobile and persistent, that the act of designing, formulating, manufacturing, marketing, distributing, and/or

selling these products was unreasonably dangerous and the foreseeable risks of causing serious health consequences exceeded the benefits associated with the design or formulation of PFAS-containing turnouts and/or Class B foam.

416. Defendants' design of toxic PFAS chemicals and/or PFAS-containing turnout gear and/or Class B foam was unreasonably dangerous and substantial factor in causing Plaintiff's injuries.

417. As a result of Defendants' defective design, Defendants are liable for such injuries and damages to Plaintiff.

418. Defendants acted with willful or conscious disregard for the rights, health, and safety of Plaintiff, as described herein, thereby entitling Plaintiff to an award of punitive damages.

FIFTH CAUSE OF ACTION

NEGLIGENCE – FAILURE TO WARN

419. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

420. Plaintiff incorporates by reference all prior paragraphs of this complaint, as though fully set forth herein.

421. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing, labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-containing materials and, through that conduct, have knowingly placed PFAS-containing products into the stream of commerce with full knowledge that they were sold to fire departments and/or to companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as Plaintiff.

422. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing, labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-containing materials and, through that conduct, have knowingly placed PFAS-containing products into the stream of commerce with full knowledge that they were sold to fire departments and/or to companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as Plaintiff.

423. Defendants' turnouts and/or Class B foam containing PFAS or PFAS-containing materials were unreasonably dangerous for their reasonably anticipated use because exposure to PFAS poses a significant threat to human health.

424. Defendants knew or should have reasonably known that the manner in which they were designing, manufacturing, testing, inspecting, labeling, marketing, distributing, and/or selling turnouts and/or Class B foam containing PFAS was hazardous to human health, and that firefighters, like Plaintiff, would be exposed to PFAS through ordinary and foreseeable uses of turnouts and/or Class B foam in the course of engaging in firefighting activities and training.

425. Defendants had a duty to warn against such latent dangers resulting from foreseeable uses of its product of which it knew or should have known.

426. At the time of manufacture, distribution, promotion, labeling, distribution, and/or sale, Defendants could have provided warnings or instructions regarding the full and complete risks of turnouts and/or Class B foam containing PFAS or PFAS-containing materials.

427. Defendants, however, breached their duty and failed to provide adequate warnings as to the potential harm that might result from exposure to PFAS or PFAS-containing products that

would lead an ordinary reasonable user, such as Plaintiff, to contemplate the danger to human health posed by such products.

428. In fact, Defendants failed to issue any warnings, instructions, recalls and/or advice as to the danger of exposure to the toxic PFAS-containing turnouts and/or Class B foam, and the potential for such exposure to cause serious physical injury and disease.

429. Defendants also did not instruct Plaintiff on the proper steps he could take to reduce the harmful effects of previous exposure, the need to have periodic medical examinations including the giving of histories which revealed the details of the previous exposure, and the need to have immediate and vigorous medical treatment for all related adverse health effects.

430. Plaintiff did not and could not have known that the use of turnouts and/or Class B foam in the ordinary course of performing their duties as firefighters could be hazardous to their health, bioaccumulate in the blood, and cause serious health effects, including cancer - dangers which were not obvious to Plaintiff. Had Defendants adequately warned Plaintiff, he would have heeded such warnings.

431. The burden on Defendants to guard against this foreseeable harm to Plaintiff was minimal, and merely required that they provide adequate instructions, proper labeling, and sufficient warnings about their PFAS-containing products.

432. Defendants were in the best position to provide adequate instructions, proper labeling, and sufficient warnings about the PFAS-containing, turnouts and/or Class B foam and to take steps to eliminate, correct, or remedy any exposure or contamination they caused.

433. As a direct and proximate result of Defendants' negligent failure to provide adequate and sufficient warnings, Plaintiff suffered the injuries and damages described herein for which Defendants are strictly liable.

434. Further, Defendants further breached that duty by continuing to release contaminants into Plaintiff's local water supply by continuing their manufacture, marketing, sale, and/or use of PFAS chemicals within the proximity of Plaintiff's drinking water supply and by failing to remediate its contamination.

435. Defendants acted with willful or conscious disregard for the rights, health, and safety of Plaintiff, as described herein, thereby entitling Plaintiff to an award of punitive damages.

SIXTH CAUSE OF ACTION

BATTERY

436. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

437. Plaintiff incorporates by reference the allegations contained in the preceding paragraphs, sections, and counts of this Complaint as if restated fully herein.

438. At all relevant times, Defendants possessed knowledge that the AFFF containing PFAS which they designed, engineered, manufactured, fabricated, sold, handled, released, trained users on, produced instructional materials for, used, and/or distributed were bio-persistent, bio-accumulative, toxic, potentially carcinogenic, and/or harmful/injurious and that their continued manufacture, use, sale, handling, release, and distribution would result in Plaintiff having PFAS in his blood, and the biopersistence and bioaccumulation of such PFAS in Plaintiff's Blood.

439. However, despite possessing such knowledge, Defendants knowingly, purposefully, and/or intentionally continued to engage in such acts and/or omissions, including but not limited to all such acts and/or omissions described in this Complaint, that continued to result in Plaintiff accumulating PFAS in Plaintiff's blood and/or body, and such PFAS persisting and accumulating in Plaintiff's blood and/or body such that it eventually manifested into an injury.

440. Defendants did not seek or obtain permission or consent from Plaintiff to put or allow PFAS materials into Plaintiff's blood and/or body, or to persist in and/or accumulate in Plaintiff's blood and/or body.

441. Entry into, persistence in, and accumulation of such PFAS in Plaintiff's body and/or blood without permission or consent is an unlawful and harmful and/or offensive physical invasion and/or contact with Plaintiff's person and unreasonably interferes with Plaintiff's rightful use and possession of Plaintiff's blood and/or body.

442. At all relevant times, the PFAS present in the blood of Plaintiff originated from Defendants' acts and/or omissions.

443. Defendants continue to knowingly, intentionally, and/or purposefully engage in acts and/or omissions that result in the unlawful and unconsented-to physical invasion and/or contact with Plaintiff that resulted in persisting and accumulating levels of PFAS in Plaintiff's blood.

444. Plaintiff, and any reasonable person, would find the contact at issue harmful and/or offensive.

445. Defendants acted intentionally with the knowledge and/or belief that the contact, presence and/or invasion of PFAS with, onto and/or into Plaintiff's blood, including its persistence and accumulation in the blood, was substantially certain to result from those very acts and/or omissions.

446. Defendants' intentional acts and/or omissions resulted directly and/or indirectly in harmful contact with Plaintiff's blood and/or body.

447. The continued presence, persistence, and accumulation of PFAS in the blood and/or body of Plaintiff is offensive, unreasonable, and/or harmful, and thereby constitutes a battery,

448. The presence of PFAS in the blood and/or body of Plaintiff altered the structure and/or function of such blood and/or body parts and resulted in hyperlipidemia and hyperuricemia.

449. As a direct and proximate result of Defendants' negligence, the Plaintiff has been injured, sustained severe and permanent pain, suffering, disability, impairment, loss of enjoyment of life, loss of care, comfort, economic loss and damages including, but not limited to medical expenses, lost income, and/or other damages.

SEVENTH CAUSE OF ACTION

CONCEALMENT, MISREPRESENTATION, AND FRAUD

450. This cause of action is asserted against all Defendants on behalf of the Plaintiff.

451. Plaintiff incorporates by reference all prior paragraphs of this complaint, as though fully set forth herein.

452. The Defendants have a general duty to inform Plaintiff about the actual and potential harm to Plaintiff from direct and proximate exposure to Defendants' chemical products.

453. The Defendants negligently, knowingly, willfully and maliciously concealed and falsely misrepresented information concerning the harmful nature of the fluorochemicals from the Plaintiff with the intent to deceive Plaintiff. Plaintiff thereby suffered and continues to suffer harm and damage.

454. Defendants knew that information concerning the safety risks associated with fluorochemicals and their presence in Defendants' products were material facts to Plaintiff.

455. Defendants committed fraud against Plaintiff by affirmatively representing that Defendants' fluorochemical products were harmless and did not present any risk of harm, when

Defendants knew, reasonably should have known, or had cause to know, that their products had caused, and were continuing to cause, bodily injury and/or risk of such bodily injury to Plaintiff.

456. Plaintiff relied on Defendants' affirmative representations and/or omissions in believing that Defendants' fluorochemical products were safe. Plaintiff thereby continued to use and/or be exposed to the fluorochemical products, and in not seeking treatment and/or ways to remedy his past exposure to Defendants' fluorochemical products. If Plaintiff knew otherwise, Plaintiff would have acted reasonably and differently to reduce or prevent his exposure, including finding alternative sources of drinking water.

457. Defendants are liable to the Plaintiff.

PRAYER FOR RELIEF

458. **WHEREFORE**, Plaintiff respectfully requests judgment against Defendants as follows:

- A. Entry of judgment in Plaintiff's favor and against Defendants, jointly and severally, as applicable, on each Count of this Complaint;
- B. Compensatory damages for past and future damages, including but not limited to Plaintiff's pain and suffering for severe and permanent injuries sustained by Plaintiff, including for future health care costs, medical monitoring, fear of developing future illness or disease, and/or economic loss;
- C. An order establishing a medical monitoring protocol for Plaintiff and requiring that Defendants to fund the medical monitoring protocol;
- D. Economic damages including but not limited to medical expenses, out of pocket expenses, lost earnings and other economic damages in an amount to be determined at trial;

- E. Punitive and/or exemplary damages for the wanton, willful, fraudulent, and reckless acts of the Defendants, who demonstrated a conscious disregard and reckless indifference for the safety and welfare of the public in general and of the Plaintiff in particular, in an amount sufficient to punish Defendants and deter future similar conduct, to the extent allowed by applicable law;
- F. Pre-judgment and post-judgment interest, at the legal rate, on all amounts claimed;
- G. Attorneys' fees and costs permitted by law;
- H. For equitable and injunctive relief, as necessary, to ensure that Defendants refrain from continuing to harm others;
- I. A declaration that Defendants acted with negligence, gross negligence, and/or willful, wanton, and careless disregard for the health and safety of Plaintiffs and members of the Classes; and
- J. Any such further relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiff demands trial by jury on all issues so triable.

Dated: April 23, 2024.

Respectfully Submitted,

/s/ Rachel L. Martin
RACHEL L. MARTIN, ESQ.
FLORIDA BAR NO.: 1040205
THE DOWNS LAW GROUP, P.A.
3250 Mary Street, Suite 307
Coconut Grove, Florida 33133
Telephone (305) 444-8226
Facsimile: (305)-444-6773
Email: rmartin@downslawgroup.com

Attorney for Plaintiff

CERTIFICATE OF SERVICE

I hereby certify that on this day 23rd day of April, 2024, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will send a copy of the foregoing pleading to all counsel of record by notice of electronic filing.

/s/ Rachel L. Martin